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**UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF UTAH, CENTRAL DIVISION**

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STATE OF UTAH, *et al.*,  
Plaintiffs,

v.

DONALD L. EVANS, *et al.*,  
Defendants,

and

STATE OF NORTH CAROLINA, *et al.*,  
Defendant-Intervenors.

Case No. 2:01-CV-292G

**NORTH CAROLINA  
INTERVENORS'  
MEMORANDUM IN SUPPORT  
OF MOTION TO DISMISS AND  
FOR SUMMARY JUDGMENT**

26

## TABLE OF CONTENTS

|  |    |
|--|----|
| STATEMENT OF ISSUES PRESENTED .....  | 2  |
| SUMMARY OF ARGUMENT .....  | 3  |
| STATEMENT OF UNDISPUTED FACTS .....  | 8  |
| Adoption of Federal Defendants' Undisputed Facts .....   | 8  |
| Additional Undisputed Facts .....  | 8  |
| RESPONSE TO PLAINTIFFS' STATEMENT OF UNDISPUTED FACTS. ....  | 18 |
| Adoption Of Federal Defendants' Disputed Fact .....  | 19 |
| Additional Disputed Facts .....  | 19 |
| ARGUMENT .....   | 22 |
| I.    PLAINTIFFS' REQUEST FOR A RECALCULATION OF THE 2000 CENSUS<br>AND A NEW APPORTIONMENT IS BARRED BY THE DOCTRINE OF<br>LACHES. .... | 22 |
| A.    Factual Background .....   | 22 |
| B.    The Doctrine of Laches .....   | 24 |
| 1.    Plaintiffs' Lack of Diligence in Filing This Complaint<br>Is Unexplained and Inexcusable. ....                                     | 25 |
| 2.    Plaintiffs' Delay Prejudices the North Carolina<br>Intervenors and the Citizens of North Carolina. ....                            | 28 |
| II.   IMPUTATION IS NOT "SAMPLING" PROHIBITED BY THE CENSUS ACT. ....  | 30 |
| A.    THE HISTORY OF "SAMPLING" AND IMPUTATION .....   | 32 |
| 1.    1957 Legislative History .....   | 32 |
| 2.    1976 Legislative History .....   | 35 |
| B.    IMPUTATION IN THE 1980 CENSUS .....  | 38 |
| C.    Interpretation of § 195 in <i>House of Representatives</i> . ....  | 39 |
| D.    Validity of Imputation in the 2000 Census .....  | 43 |
| III.  THE CONSTITUTION DELEGATES TO CONGRESS COMPLETE<br>AUTHORITY TO DIRECT HOW THE CENSUS SHALL BE TAKEN. ....                         | 47 |
| CONCLUSION .....   | 61 |
| CERTIFICATE OF SERVICE   |    |

## LIST OF EXHIBITS

- |           |  |
|-----------|--|
| Exhibit A | Declaration of Gary O. Bartlett, Executive Secretary-Director of the State Board of Elections (July 9, 2001)   |
| Exhibit B | Order (April 17, 2001), <i>Utah v. Evans</i> , No. 2:01-CV-23B (D. Ut)   |
| Exhibit C | Declaration of David W. Peterson, Ph.D. (July 6, 2001)<br>Appendix A ..... List of Authorities<br>Appendix B ..... Curriculum Vitae                            |
| Exhibit D | Affidavit of Barbara A. Bailar (February 7, 1982), <i>Orr v. Baldrige</i> , No. IP-81-604-C. (S.D. Ind.)   |
| Exhibit E | Defendants' Objections and Responses to Plaintiffs' Revised First Set of Interrogatories and Request for Production of Documents, Interrogatory Response No. 1 |
| Exhibit F | Order and unreported memorandum opinion (July 1, 1985), <i>Orr v. Baldrige</i> , No. IP 81-604-C (S.D. Ind.)   |
| Exhibit G | Defendants' Objections and Responses to Plaintiffs' Revised First Set of Interrogatories and Request for Production of Documents, Table 3                      |
| Exhibit H | Excerpts from Volume 1: MAX FARRAND, RECORDS OF THE FEDERAL CONVENTION OF 1787 (1911)  |
| Exhibit I | Excerpts from Volume 2: MAX FARRAND, RECORDS OF THE FEDERAL CONVENTION OF 1787 (1911)  |
| Exhibit J | Excerpt from SOL BLOOM, HISTORY OF THE FORMATION OF THE UNION UNDER THE CONSTITUTION   |
| Exhibit K | Excerpt from THE FEDERALIST No. 54 (James Madison)   |
| Exhibit L | Excerpt from JOURNALS OF THE CONTINENTAL CONGRESS 1774-1789 (Gaillard Hunt ed., Government Printing Office 1922) (1783)  |
| Exhibit M | Excerpt from THE FEDERALIST No. 36 (Alexander Hamilton)  |

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MEMORANDUM IN SUPPORT  
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FOR SUMMARY JUDGMENT**

### **STATEMENT OF ISSUES PRESENTED**

- I. Are plaintiffs' statutory and constitutional claims barred by the doctrine of laches because of unexplained and inexcusable delay in instituting suit and resultant prejudice to the State of North Carolina and her citizens?
- II.. Does the statistical method of imputation used in the 2000 census violate Section 195 of the Census Act where such method is not precluded by the text of the Act and the legislative history of the enactment and amendment of the section reveals that Congress was concerned with the use of the statistical method of random sampling and not with the Census Bureau's pre-existing practice of imputation.
- III. Does the statistical method of imputation violate the Census Clause of the Constitution where the Framers of the Constitution deliberately invested in Congress virtually unfettered discretion to prescribe how the decennial Census shall be taken?

### SUMMARY OF ARGUMENT

Plaintiffs' Complaint seeks to reverse the results of the 2000 census with respect to the determination that North Carolina, instead of Utah, is entitled to an additional seat in the House of Representatives. Plaintiffs have moved for summary judgment, contending that the Census Bureau's use of the statistical method of imputation violates the Census Act, the Enumeration Clause of the Constitution, and several federal statutes. For the reasons set forth below, their motion should be denied, and North Carolina defendant-intervenors' motion to dismiss and for summary judgment granted.

North Carolina intervenors first move to dismiss this action on the ground that plaintiffs' claims are barred by the doctrine of laches because of the unexplained and inexcusable delay in bringing the present action to the substantial prejudice of the defendant-intervenors - - the State of North Carolina, its twelve Representatives in Congress, and the voting public. This is plaintiffs' second lawsuit seeking to reverse the results of the 2000 census. In their first action, *Utah v. Evans*, No. 2:01-CV-23B (D.Ut.) (hereinafter "*Evans I*"), which alleged other grounds and was dismissed on its merits, plaintiffs filed an original and two amended complaints. Plaintiffs' untimely motion to file a third amended complaint challenging the Census Bureau's allegedly unlawful use of imputation in taking the 2000 census was denied by the court on the grounds that plaintiffs were well aware when they initiated their action that, since at least 1940, the Census Bureau has used a counting process known as imputation to fill in gaps in its enumeration. That the Census Bureau's use of imputation affected the results of the census could have been known to plaintiffs with the exercise of due diligence in their earlier lawsuit. Notwithstanding their knowledge of the Bureau's

use of imputation, plaintiffs inexcusably delayed attempting to amend their complaint in *Evans I* and the subsequent filing of the present action.

Plaintiffs' unreasonable delay substantially prejudices defendant-intervenors because the existence of the lawsuit disrupts the planning of the next congressional elections in North Carolina. Such elections are a time-sensitive process, beginning with the apportionment of Representatives and the redrawing of congressional districts. Once new districts are drawn, North Carolina's plan must be precleared by the United States Department of Justice pursuant to Section 5 of the Voting Rights Act. All of this must be accomplished before the January 3, 2002, candidate filing period opens.

Well before the January filing deadline, new districts must be drawn so that potential candidates can have an adequate opportunity to assess their political strength in the new districts. If filing dates were to be postponed and stand-alone congressional primary elections required because of a delayed apportionment, the result would be the multi-million dollar additional expense of conducting separate primaries. In addition, such stand-alone primaries invariably diminished voter turnout. To avoid such disruption, Congress has established a virtually self-executing reapportionment process with strict time-lines which allow the State to move forward with its redistricting no later than April 1st. Congress also attempted to assure expeditious challenges to the Census Bureau's proposed plans for the actual taking of the census because it recognized the impracticability of challenging the census after it has been conducted.

The use of imputation does not violate § 195 of the Census Act. In 1957, Congress enacted § 195 of the Census Act to permit the use of "sampling" "except for the determination of population for apportionment purposes." Legislative history demonstrates that Congress used the term

“sampling” in its commonly understood meaning – the selection of a random sample, which is then used to make inferences about the total population from which the sample is drawn. Congress was aware of the Bureau’s use of imputation in the 1940 and 1950 censuses, but nothing in the legislative record hints at any concern with imputation procedures.

In 1976 Congress amended § 195 to require sampling whenever in the opinion of the Secretary of Commerce it was feasible to do so, but maintained the exception for the apportionment count. The legislative record concerning the amendment of the statute contains no indication that Congress was addressing the Census Bureau’s use of imputation in the 1960 and 1970 censuses to increase their accuracy or that the amendment was intended to bar the use of imputation. Congress’ understanding of “sampling” continued to be the conventional practice of probability sampling using random selection.

The 1980 census employed imputation to assign a population count to units known to be occupied but for which the number of occupants had not been obtained. Imputation resulted in the shift of a Representative from Indiana to Florida and was unsuccessfully challenged in *Orr v. Baldrige*, No. IP 81-604-C (S.D. Ind.). The *Orr* plaintiffs accepted the common understanding that imputation was not random sampling prohibited by § 195, and the trial court agreed that the statute delimited only random sampling.

In *House of Representatives v. United States Department of Commerce*, 525 U.S. 316 (1999), the Supreme Court held that § 195 prohibited random sampling for purposes of conducting the apportionment count. However, it is clear that that sampling proposed by the Census Bureau for the 2000 census and reviewed by the court involved classic examples of a simple random sample and a stratified sample. These sampling methods bear no relationship to imputation and were not



considered by the Court, although the Court, like Congress, was aware of the Bureau's longstanding use of imputation in the conduct of the previous censuses.

Imputation is a well recognized and widely employed statistical practice, used to cope with the problem of missing or incomplete data in a survey. The practice is not a form of statistical sampling but rather is a distinct methodology which serves a different purpose from random sampling. Imputation is applicable in cases in which the missing data are known or reasonably believed to be correlated with the observed or known data, and it capitalizes on that correlation to produce plausible values for the missing data. Imputation increases the accuracy of the census count because ignoring missing data by imputing "zero" distorts the count and results in a known undercount. The Secretary of Commerce and the Census Bureau are vested with virtually unlimited discretion in conducting the decennial census. Because the imputation of citizens is reasonably grounded on known data, the Census Bureau's use of the procedure is consistent with the goal of obtaining the most accurate census count possible.

The use of imputation or other statistical methodology does not violate the Census Clause of the Constitution. The text of Art. 1, § 2, cl. 3 provides in pertinent part that the "actual Enumeration . . . shall be made in such Manner as [Congress] shall be Law direct." A careful review of the records of the Constitutional Convention confirms that the Framers of the Constitution meant that Congress should have broad discretion in directing how the enumeration or census shall be conducted. The words "actual Enumeration" were employed by the Framers to distinguish the Enumeration or census, which was to be an actual counting of the people who were to be numbered in the census, from the estimation or "conjectural ratio," which the Framers used to allocate Representatives in the first Congress. The few reference to "estimation" by the Framers concerned

the estimation for allocating the membership of the first Congress. The estimation attempted to take into account both the population and the wealth of the States. When the Framers decided representation in the House of Representatives would be based on population alone, it became necessary to provide the best manner possible for ascertaining the actual population of each of the States. This manner was decided at that time to be a head-count of the people. Estimation at that time was inexact at best, and statistics would not evolve into a separate scientific discipline until the Twentieth Century. The Framers decided that the Constitution should limit only the discretion of Congress in deciding when and how often future enumerations would take place and the consequent reapportionments of the House after each such enumeration. The Framers, though, did not restrict Congress' discretion in directing how the Enumeration should be done. Thus, plaintiffs' argument that use of imputation or other statistical method violates the Census Clause is without historical or textual basis.<sup>1</sup>

Therefore, because plaintiffs have been inexcusably dilatory in bringing their present challenge to the reapportionment of the Representatives as result of the 2000 census to the prejudice of the State of North Carolina, defendant-intervenors' motion to dismiss on the ground of laches should be granted. Further, because the use of imputation does not violate § 195 of the Census Act, any precedent of the Supreme Court, or the Constitution itself, plaintiffs' motion for summary judgment should be denied, and defendant-intervenors' granted.

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<sup>1</sup> With respect to plaintiffs' argument that the Bureau's use of imputation violates other federal law, such as the Administrative Procedures Act, defendant-intervenors rely on and incorporate by reference herein, the arguments presented by the United States.

## **STATEMENT OF UNDISPUTED FACTS**

### **ADOPTION OF FEDERAL DEFENDANTS' UNDISPUTED FACTS**

1. North Carolina defendant intervenors hereby adopt and incorporate by reference as though fully set forth herein the Statement of Material Facts Not In Dispute of the federal defendants, Donald L. Evans, Secretary of Commerce, and William G. Barron, Acting Director, United States Census Bureau.

### **ADDITIONAL UNDISPUTED FACTS**

2. Certain important characteristics usually accompany a discussion of statistical sampling. Two common definitions of sampling and samples put forth by statisticians are:

[S]tatistical samples ... are samples selected by a specified random process. (Williams, A SAMPLER ON SAMPLING, p. 44.)

A sample survey may be defined as a study involving a subset (or sample) of individuals selected from a larger population. Variables or characteristics of interest are observed or measured on each of the sampled individuals. These measurements are then aggregated over all individuals in the sample to obtain summary statistics (e.g., means, proportions, totals) for the sample. It is from these summary statistics that extrapolations can be made concerning the entire population. (Levy & Lemeshow, SAMPLING FOR HEALTH PROFESSIONALS, pp. 1-2.)

See Declaration of David W. Peterson, Ph.D. (hereinafter "Peterson Decl.") ¶ 6, attached as Exhibit C.

3. As the Williams definition above suggests, there is usually an element of randomness associated with the sampling process. In statistics classes, the subject of sampling is almost always introduced using an example in which the sample is drawn at random from a certain well-defined target population. Prior to the drawing of the sample, every member of the target population has an equal chance of being included in the sample. If the drawing is done one subject at a time, after each

draw each remaining member of the population has an equal chance of being selected on the next. This is called simple random sampling. It can be made more complicated by dividing the population up into sub-units, and drawing a simple random sample from each – the resulting combined sample is called a stratified sample. Or one can draw the sample randomly from the population in such a way that some members always have a greater chance of being selected at each stage than do others – this type of sample is called a probability sample. The main point is that usually when one thinks of or engages in statistical sampling, it involves random sampling from some population. Were the activity to be repeated in its entirety, it is very likely that a different sample would be drawn, due to the randomness inherent in the process. *See Peterson Decl.* ¶ 7.

4. As the Levy and Lemeshow definition above suggests, statistical sampling is usually done for the purpose of estimating some average or proportion that is characteristic of an entire population. One might for example measure the heights of a randomly chosen group of undergraduate students for the purpose of estimating the average height of undergraduates generally. The sample would not typically be used, for example, to estimate or impute the heights of individual students not included in the sample. *See Peterson Decl.* ¶ 8.

5. The imputation process used by the Bureau of the Census in the 2000 census does not involve random selection; it is a deterministic process. In this sense, it lacks one of the attributes commonly associated with statistical sampling. Additionally, the Bureau's imputation process is focused specifically on the assignment of data values to individual members of the population, rather than to estimation of overall population parameters. In this respect, too, it differs from the common conception of statistical sampling. *See Peterson Decl.* ¶ 9.

6. Imputation is a method for coping with survey data that are only partially complete. It is applicable in cases in which the missing data are known (or reasonably believed) to be correlated with the observed or known data, and it capitalizes on that correlation to produce plausible values for the missing data. Imputation is not an alternative to simple random sampling; it is a procedure with a different purpose directed to solving a different problem. Imputation is well-known and widely used. Dr. Rubin devotes a section in his book *STATISTICAL ANALYSIS WITH MISSING DATA* (Roderick J. A. Little & Donald B. Rubin, Wiley 1987, pp. 62 *et seq.*) to imputation, and discusses there (with numerous references to pre-existing literature) not only hot deck imputation but specifically the nearest-neighbor form of hot deck imputation used by the Bureau of the Census in the 2000 census. The topic is discussed as well in Barry L. Ford's *An Overview of Hot-Deck Procedures* in *INCOMPLETE DATA IN SAMPLE SURVEYS*, vol. 3, part IV (Academic Press 1983, pp. 185 *et seq.*). See Peterson Decl. ¶ 10.

7. Using imputation to deal with problems caused by missing data can materially improve the quality, reliability and accuracy of a statistical analysis. Imputation has a rational scientific basis, its use by the Bureau of the Census is supported by data correlations ("local homogeneity") observed in census data from previous years, the process is deterministic rather than random in its application, and there is no alternative method for dealing with missing data (*e.g.*, not imputing at all) that is as likely to improve the accuracy of the census count. Although imputation may have worked to plaintiffs' disadvantage in this case, they have not demonstrated that imputing produced either an incorrect census count, or a count that is less correct than one not using imputing. See Peterson Decl. ¶ 11.

8. The quality and completeness of a census are subject to a variety of influences, each of which may be characterized as manipulative, depending on one's viewpoint. The size of the overall census budget, the degree and type of training afforded the census takers, the differential amounts of time and other resources devoted to counting in some locales relative to others are all such factors, because they can be varied and because they will affect the final tallies, can be considered manipulative. Plaintiffs can cite no proof that the Bureau of the Census itself has pursued the counting of the 2000 census with any objective save that of achieving as complete a count as is practical. *See* Peterson Decl. ¶ 12.

9. References to sampling occur several places in the legislative history attendant to the 1957 amendments to the Census Act, including the addition of Section 195. All of the references are consistent with the usual concept of sampling, namely that involving random selection and the estimation of some overall characteristics of the population. Nothing suggests that the user of the terms "sample" or "sampling" was referring to hot-deck imputation, or any similar procedure. *See* Peterson Decl. ¶ 13.

10. Although the term "sampling" is not defined, the statement of purpose accompanying the 1957 legislation to amend the Census Act indicates that the use of sample procedures would be authorized by Section 195, because experience had shown that some of the information desired in connection with a census could be secured efficiently through a "sample survey" and that in some instances, a portion of the universe to be included might be efficiently covered on a sample rather than a complete enumeration basis. This terminology evokes nothing more than the drawing of a sample by conventional sampling techniques such as random or probability sampling, and then using

the sample to make inferences about overall qualities of the population from which it was drawn.

*See* Peterson Decl. ¶ 14.

11. An example of Congress' and the Census Bureau's use of the term "sampling" is provided by Dr. A. Ross Eckler's July 25, 1957, committee testimony. Dr. Eckler, Deputy Director of the Bureau, notes that after the 1950 census, the Bureau engaged in a certain amount of testing work to determine the accuracy of figures obtained by means of small samples. His description is consistent with choosing a statistical sample using a standard technique such as probability sampling. *See* Peterson Decl. ¶ 15.

12. In the August 9, 1957 Report on the proposed Census Act amendments, the committee notes that Section 195 authorizes the use of sampling procedures, except in connection with apportionment of Representatives, when efficient and accurate coverage may be effected through a sample survey. There is no proximate mention of imputation, or the use of an item in the sample to be substituted for an item not in the sample. Again, the usage of sampling terminology here is consistent with the circumstance in which a sample is drawn using random sampling or some close variation, and the characteristics of the sample are projected to the population as a whole. *See* Peterson Decl. ¶ 16.

13. In his testimony on March 20, 1957, regarding the census budget, Bureau of the Census Director, Dr. Robert W. Burgess, refers to sampling in a variety of contexts. With regard to foreign trade and shipping statistics, he seems to be referring to a sample gathered by some method such as probability sampling, and using that sample to make inferences about the population from which the sample was drawn. Likewise, when Dr. Burgess discusses the possibility of using a 25% sample to collect detailed information about an individual's occupation and industry, his usage evokes again

a sample drawn randomly, perhaps using a probability sampling technique, and then using the sample to estimate characteristics of the populace overall. At the same hearing, Howard C. Grieves, Assistant Director for Economics, also spoke about the use of samples in collecting foreign trade statistics. His use of sampling terminology is consistent with a straightforward application of probability sampling or some close variant for the purpose of estimating some overall characteristics of the population being sampled. When Dr. Burgess again mentions sampling in connection with a transportation survey, his use of the terminology is entirely consistent with an application in which a sample is drawn in accord with standard statistical techniques and used for the purpose of estimating overall characteristics of the population from which the sample is drawn. Likewise, Dr. Burgess' reference to sampling in connection with passenger travel statistics appears to refer to an ordinary, scientifically drawn sample, whose characteristics are to be extrapolated to the population as a whole. *See* Peterson Decl. ¶ 17.

14. The Committee Report dated March 24, 1976, regarding legislation for a mid-decade census and amendments to § 195 of the Census Act, discusses the possibility of using a sample survey in lieu of a full-scale census at mid-decade. The discussion there suggests nothing other than the conventional meaning of a sample, namely that drawn according to a process such as probability sampling, for the purpose of estimating overall characteristics of the population. *See* Peterson Decl. ¶ 18.

15. Congresswoman Pat Schroeder's discussion of the bill to amend the Census Act on April 7, 1976, mentions that it "directs the Secretary of Commerce to use sampling methods rather than 100 percent questionnaires whenever feasible" and that "the committee has rejected the idea of using ... a 25 percent across-the-board sample survey." Ms. Schroeder's remarks do not refer to any form



of sampling other than the conventional one, namely the drawing of a sample by random selection or one of its close variants, and the use of the resulting sample to estimate qualities of the population as a whole. In similar remarks on October 1, 1976, Congresswoman Schroeder describes the bill as directing “the Secretary of Commerce to use sampling methods rather than 100 percent questionnaires whenever feasible.” Nothing in these remarks or their context to suggest that Ms. Schroeder intended her use of the word “sampling” to extend beyond the conventional – the drawing of a sample by standard techniques and its use to project to the population as a whole. *See* Peterson Decl. ¶ 19.

16. The Committee Report dated September 16, 1976, on the legislation to provide for a mid-decade census of population, notes that one of the purposes of the legislation is “to direct the Secretary of Commerce to use sampling and special surveys in lieu of total enumeration in the collection of statistical data whenever feasible.” With respect to the mid-decade census, the report notes that a “survey designed to include only 25 percent of the Nation’s population ... would not be nearly so useful” as a full census. In discussing Section 7 of the bill, the report notes that new language is added at the end of the subsection “to encourage the use of sampling and surveys in the taking of the decennial census,” and that “the use of sampling procedures and surveys is urged for the sake of economy and reducing respondent burden.” Concerning Section 8 of the bill, the report notes that the Secretary “may use statistical techniques such as sampling and surveys to produce current, comprehensive and reliable data.” It points out that Section 10 requires the Secretary of Commerce to use sampling procedures whenever he deems it feasible, except in the apportionment of the U. S. House of Representatives. There is no indication here that the committee intended any meaning of sampling beyond the conventional – the drawing of a sample according to generally

accepted probabilistic methods and the use of that sample to estimate qualities of the population as whole. *See* Peterson Decl. ¶ 20.

17. When the Supreme Court ruled in *House of Representatives*, it was responding to a proposal by the Bureau of the Census to draw samples in accord with random sampling techniques, and to extrapolate qualities of these samples to the populations from which they were drawn. The Bureau of Census' imputation techniques, in use in one form or another since the 1940 census, were not at issue. The references in the Court's decision to statistical sampling evoke no more than the conventional form of sampling, namely the design and collection of a sample according to generally accepted probabilistic techniques, and then the use of that sample to estimate overall qualities of the population from which it was drawn. Imputation cannot be equated with this type of statistical sampling. *See* Peterson Decl. ¶ 21.

18. By the simple expedient of adopting a sufficiently broad definition of statistical sampling, one which extends beyond the simple random sample and its proximate variations, Drs. Rubin and Wolfson conclude that the imputation method used by the Bureau of the Census in the 2000 census is a form of statistical sampling, and thus it is subject to the Supreme Court's prohibition of the use of sampling articulated in *House of Representatives*. But such a broad definition of statistical sampling cannot endure in the present circumstances, because under the definitions offered by Drs. Rubin and Wolfson, the portion of the target population that was counted in the 2000 census through means other than imputation is itself but a sample of the targeted population – it is a so-called convenience sample, and it consists precisely of those members of the target population who are relatively easily tallied either by mail or by other direct means. This convenience sample is not a random sample, it is not even a probability sample, it is not a sample

from which one can calculate precise confidence intervals, and it is a sample which, judging from past censuses, is probably biased against the inclusion of African Americans and perhaps other identifiable groups as well. Congress cannot have meant to outlaw sampling in as broad a form as articulated by Drs. Wolfson and Rubin, for had it done so it would have outlawed the census itself in any form short of an absolutely exhaustive count. *See* Peterson Decl. ¶ 22.

19. Although North Carolina is not itself a covered jurisdiction under Section 5 of the Voting Rights Act of 1965, as amended, 40 of her counties are covered and statewide legislation affecting elections in those counties must be precleared by the United States Department of Justice. *See* Declaration of Gary O. Bartlett (hereinafter "Bartlett Decl."), ¶ 2, attached as Exhibit A.

20. The highest-profile races on the ballot in North Carolina for the 2002 elections will be those for the United States House of Representatives. In addition, one seat for U.S. Senate - - which has historically produced one of the largest election turnouts - - will be on the ballot. State House and State Senate elections also will be proceeding at the same time. Most county-level offices will be on the ballot as well. Candidate filing for the 2002 elections will begin at noon on the first Monday in January and continue until noon on the first Monday in February. The primary will be held on May 7, 2002, and the general election will be held on November 5. All these deadlines are traditional dates set by statute. Any disruption to this election schedule would require legislative action. The General Assembly of North Carolina is not scheduled to meet again before the filing period opens, once it completes its budget and redistricting work later this summer. *See* Bartlett Decl. ¶ 3.

21. In January, 2001, the Governor of North Carolina received from the Clerk of the United States House of Representatives certification dated January 16, 2001 that North Carolina had been

allocated 13 House seats. The General Assembly has been working on redistricting the State into 13 districts since they received the census data shortly before April 1, 2001, and will complete a Congressional redistricting plan later this summer. After the plan is adopted, preclearance will be required by the Voting Rights Section of the United States Department of Justice. At best, the preclearance process takes 60 days, and for decennial redistricting plans normally takes substantially longer. Although the opening of the candidate filing period may seem a distant date, time is of the essence in election matters and, even without disruption, the time between preclearance and candidate filing as a practical matter may be only a matter of a few weeks. *See* Bartlett Decl. ¶ 4.

22. Candidates need to know before the end of the year the configurations of the districts for seats in the United States House in order to determine their potential for success and whether they will file for a given seat. In order to campaign effectively, a candidate must know the parameters of the district he or she is seeking to represent. Knowing the constituency is essential to evaluating the prospects of a candidacy, such as political and grass roots support, fund raising potential, and ability to communicate with the voters. The earlier the districts are finalized, the better prospective candidates will be able to evaluate the efficacy of a candidacy. Without adequate time to prepare, potential candidates may forego seeking election. Any delays in establishing district boundaries creates an unfair and uneven playing field with a decisive advantage to wealthy candidates. *See* Bartlett Decl. ¶ 5.

23. After a redistricting is complete, voters must be educated about the district to which they have been assigned and the candidates for office in that district. North Carolina has over five million registered voters, and providing adequate public information about election changes such as

redistricting is an arduous task. In addition, elections officials in all 100 counties must assure that every voter is properly assigned to a district. *See* Bartlett Decl. ¶ 6.

24. North Carolina was forced by court order to hold a stand-alone September primary for Congressional races in 1998. Turnout was abysmal, only eight percent; by contrast, turnout for the state elections held on the regularly scheduled May date was eighteen percent. (The May turnout was also adversely impacted by the removal of the Congressional races from the regular primary.) Candidates have found it difficult to campaign in the summer. In addition, a separate, stand-alone primary for Congressional seats could cost the State between two and one-half and five million dollars, as well as reduce voter turnout. North Carolina has been hit by major hurricanes in September in recent years. Had one of these hurricanes hit on or near an election day it would have greatly disrupted the election. North Carolina must have adequate time for absentee ballots to be mailed to members of the armed services and their dependents living overseas and returned by them. State law requires absentee ballots to be ready 50 days before an election. This is consistent with expectations of the United States Department of Defense, and is necessary in order to avoid the situation most recently found in Florida in which ballots were being received and counted after election day. For all these reasons, it is important to the people of North Carolina to hold all primaries in May as scheduled and not later in the year. *See* Bartlett Decl. ¶ 7.

#### **RESPONSE TO PLAINTIFFS' STATEMENT OF UNDISPUTED FACTS.**

Pursuant to DUCivR 56-1(c), North Carolina defendant intervenors note that a genuine issue of material fact exists as to the following facts contained in the Plaintiffs' Statement of Undisputed Facts. *See* [Plaintiffs'] Memorandum in Support of Motion for Summary Judgment (hereinafter "Pl. Mem."), pp. 4-21.

### **ADOPTION OF FEDERAL DEFENDANTS' DISPUTED FACT**

1. North Carolina defendant intervenors hereby adopt and incorporate by reference as though fully set forth herein the Response to Plaintiffs' Statement of Material Facts Not in Dispute of the federal defendants, Donald L. Evans, Secretary of Commerce, and William G. Barron, Acting Director, United States Census Bureau.

### **ADDITIONAL DISPUTED FACTS**

2. DISPUTE TO PLAINTIFFS' FACT 3. Plaintiffs' statement omits the additional legislative history beginning in 1850, where the requirement to personally visit each dwelling house was expanded to allow inquiry of an agent of a family, if it was not possible to find a member of the family capable of providing the necessary information; in 1919 this was expanded to gathering information from neighbors of a household where no one is present. *See House of Representatives*, 525 U.S. at 335 n 5.

3. DISPUTE TO PLAINTIFFS' FACT 4. *House of Representatives*, 525 U.S. at 337, does not state that the mailout-mailbox system "continue the longstanding practice of requesting up-to-date information directly from each housing unit."

4. DISPUTE TO PLAINTIFFS' FACT 5-20. To the extent the statements of undisputed facts rely on the declaration of Dr. Lara Wolfson and do not accurately restate or reflect the citations to the Administrative Record, the Department of Justice Discovery Responses, the Affidavit of Barbara A. Bailar (hereinafter "Bailar Aff."), attached as Exhibit D, or the Census Bureau Declaration (hereinafter "Census Bureau Decl."),<sup>2</sup> these facts are disputed. To the extent the statements rely

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<sup>2</sup> The federal defendants are filing an affidavit by the Census Bureau in support of their motion and memorandum which definitively describes historical and current census practices and

solely on the declarations and editorial comment of Dr. Wolfson, the facts lack a proper foundation of personal knowledge or required expertise and are, therefore, disputed.

5. DISPUTE TO PLAINTIFFS' FACT 21. Dr. Donald B. Rubin and Dr. Wolfson have conveniently attempted to redefine the term sampling so as to encompass the fundamentally different process of imputation and incorrectly characterize the imputation procedures used by the Census Bureau. *See* Peterson Decl.; Bailar Aff.; Census Bureau Decl.

6. DISPUTE TO PLAINTIFFS' FACT 22-25. Plaintiffs' statement misstates the explanation of imputation contained in the referenced United States Department of Commerce, Report to Congress; imputation is not statistical sampling and statistical sampling is not imputation. *See* A.R. at 23; Bailar Aff.; Census Bureau Decl.; Peterson Decl.

7. DISPUTE TO PLAINTIFFS' FACT 26-35. To the extent the statements of undisputed facts are inconsistent with the Bailar Aff. and Census Bureau Decl., they are disputed. To the extent the statements of undisputed facts rely solely on the declarations and editorial comments of Drs. Wolfson and Rubin, the facts lack a proper foundation of personal knowledge or required expertise, and are, therefore, disputed.

8. DISPUTE TO PLAINTIFFS' FACT 36. Application of nearest neighbor hot-deck imputation does not overestimate the population. *See* Census Bureau Decl.; Census Bureau Memorandum Series B-17, *Census 2000 - Missing Housing Units Status and Population Data* (B-17) (A.R. C 01010-28).

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procedures.

9. DISPUTE TO PLAINTIFFS' FACT 37. The use of imputation improves the overall accuracy of the census, including the distributive accuracy. *See* Peterson Decl.; Bailar Aff.; Census Bureau Decl.

10. DISPUTE TO PLAINTIFFS' FACT 38. The Administrative Record contains analyses and studies demonstrating that imputation in the 2000 census, as well as earlier censuses, accurately counts people in appropriate proportions. *See* Bailar Aff.; Census Bureau Decl.; *House of Representatives* is irrelevant to imputation as it deals with statistical sampling.

11. DISPUTE TO PLAINTIFFS' FACT 39-43. To the extent the statements of undisputed facts are inconsistent with the Bailar Aff. and Census Bureau Decl., they are disputed. To the extent the statements of undisputed facts rely solely on the declarations and editorial comments of Drs. Wolfson and Rubin, the facts lack a proper foundation of personal knowledge or required expertise, and are, therefore, disputed. There is no evidence that imputation is a process particularly susceptible to manipulation or that as used by the Census Bureau it has resulted in a manipulation of the apportionment count. *See* Peterson Decl.; Bailar Aff.; Census Bureau Aff.

12. DISPUTE TO PLAINTIFFS' FACT 44. Imputation as used in the 2000 and earlier censuses is not a form of statistical sampling. *See* Peterson Decl.; Bailar Aff.; Census Bureau Decl.

13. DISPUTE TO PLAINTIFFS' FACT 46. The imputation procedures used by the Census Bureau enhance the accuracy of the census enumeration. *See* Peterson Decl.; Bailar Aff.; Census Bureau Decl.

14. DISPUTE TO PLAINTIFFS' FACT 47. Imputation of "unknown occupied/vacant/delete" status is applied to units whose existence has at some time been confirmed. *See* Census Bureau Decl.



## ARGUMENT

### I. PLAINTIFFS' REQUEST FOR A RECALCULATION OF THE 2000 CENSUS AND A NEW APPORTIONMENT IS BARRED BY THE DOCTRINE OF LACHES.

In their complaint, plaintiffs seek not only a declaratory judgment, but injunctive relief requiring the federal defendants to recalculate the 2000 census apportionment count by removing persons counted by the process of imputation. They also seek to have the federal defendants submit the “new” apportionment count “to the President for subsequent transmittal to the Clerk of the House and, from him, to the States.”<sup>3</sup> Pl.’s Compl., Prayer for Relief (b). In apportionment cases, however, time is of the essence, and Utah’s delay in filing this action bars relief.

#### A. FACTUAL BACKGROUND

The 2000 census was conducted on April 1, 2000. Pursuant to the requirements of 13 U.S.C. § 141(b) (2001), the apportionment count was tabulated by the federal defendants and reported to the President within nine months after the census date, in this case on December 28, 2000. The President transmitted the apportionment calculation to Congress on January 4, 2001, and it was received by the House of Representatives on January 5, 2001.<sup>4</sup> The Clerk certified the apportionment to the States on January 16, 2001, and North Carolina was apportioned thirteen

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<sup>3</sup> This latter request is not relief available in this case. The President and the Clerk of the House of Representatives are not parties to this action; more importantly, the federal court lacks jurisdiction to enjoin the President in the performance of his official duties. *Franklin v. Massachusetts*, 505 U.S. 788, 803 (1992).

<sup>4</sup> Pursuant to 2 U.S.C. § 2a(a) (2001), the President is required to transmit the apportionment calculation to Congress “[o]n the first day, or within one week thereafter, of the first regular session” after the census. Within 15 days, the Clerk of the House of Representatives must “send to the executive of each State a certificate of the number of Representatives to which such State is entitled.” 2 U.S.C. § 2a(b) (2001).

Representatives. Shortly before April 1, 2001, North Carolina received her population data for redistricting, and the process of redrawing Congressional districts commenced. *See* Declaration of Gary O. Bartlett, Executive Secretary-Director of the State Board of Elections (hereinafter “Bartlett Decl.”) ¶ 4, attached as Exhibit A.

On January 10, 2001, Utah plaintiffs filed their first lawsuit challenging the apportionment count and the allocation of thirteen Representatives to North Carolina on statutory and constitutional grounds based on the inclusion in the count of federal military and civilian employees (and their dependents) serving overseas. Pl.’s Compl., *Utah v. Evans*, No. 2:01-CV-23B (D. Ut) (hereinafter “*Evans I*”). Recognizing the urgency of the statutory deadlines, plaintiffs’ initial complaint named Jeff Trandahl, the House Clerk, as a defendant and also sought a temporary restraining order and preliminary injunction enjoining the Clerk from certifying the apportionment of Representatives to North Carolina and Utah.<sup>5</sup> The filing of motions for summary judgment and the hearing of the case were fast-tracked at plaintiffs’ insistence. On January 30, 2001, plaintiffs’ Memorandum in Support of Summary Judgment in *Evans I* included the statement:

11. Since at least 1940, the Census Bureau has used a counting process known as “imputation” to fill in gaps in its enumeration. When an enumerator believes that a particular residence is occupied, but is unable to obtain information about its occupants, the Census Bureau “imputes” that information based on the demographics of nearby households. In the 1980 census, the Census Bureau added approximately 761,000 individuals to the total nationwide population through imputation.

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<sup>5</sup> The Clerk was dismissed as a defendant in the case and the Motion for Preliminary Injunction and Application for Temporary Restraining Order was withdrawn, in exchange for an agreement by the federal defendants not to argue that the Clerk’s transmittal by plaintiffs of the certificates to the States on or before January 20, 2001, precluded the court from considering plaintiffs’ claims. Stipulation and Agreement, *Evans I*, ¶¶ 1, 3. North Carolina had not yet had the opportunity to move to intervene in the case when this agreement was reached.

The *Evans I* three-judge panel heard arguments on cross-motions for summary judgment on March 28, 2001.

On Friday, April 13, 2001, Utah plaintiffs sought to amend the complaint in *Evans I* to include a challenge to the Census Bureau's use of imputation as impermissible sampling. On April 17, 2001, the *Evans I* court entered an Order denying the motion to amend on grounds of undue delay. See Order, *Evans I*, attached as Exhibit B. The *Evans I* court noted first, that there is no doubt that "from the commencement of this action, plaintiffs were aware of the Census Bureau's practice of 'imputing' certain figures for purposes of actually enumerating the resident population of the United States"; second, that "[f]rom the outset of the action, plaintiffs continually represented to the court that an expedited decision was imperative"; and third, that plaintiffs failed to explain why they did not attempt to gain the imputation figures earlier or why discovery had not been sought on the issue. *Id.* Contemporaneously with its order denying Utah plaintiffs' motion to amend, the *Evans I* court filed its Memorandum Opinion denying plaintiffs' challenge to the apportionment based on overseas federal employees. On April 25, 2001, the same Utah plaintiffs filed this, their second cause of action, to challenge the apportionment count based on the issue of imputation.

#### **B. THE DOCTRINE OF LACHES**

The defense of "laches consists of two elements: (1) inexcusable delay in instituting a suit; and (2) resulting prejudice to defendant from such delay." *In re Centric Corp.*, 901 F.2d 1514, 1519 (10th Cir.) (quoting *Brunswick Corp. v. Spinit Reed Co.*, 832 F.2d 513, 523 (10th Cir. 1987)), *cert. denied*, 498 U.S. 852 (1990). "Whether a claim is barred by laches must be determined by the facts and circumstances in each case and according to right and justice." *Hutchinson v. Pfeil*, 105 F.3d 562, 564 (10th Cir.) (internal citations and quotations omitted), *cert. denied*, 522 U.S. 914 (1997).

Laches is proven by a combination of lack of diligence by the party against whom the defense is asserted, and prejudice to the party asserting the defense. *Costello v. United States*, 365 U.S. 265, 282 (1961).

This equitable doctrine is supported by sound principals of judicial and public policy that operate independently of the merits of plaintiffs' claims. The doctrine recognizes that an unexcused delay in bringing a claim, whether through simple neglect or intentional abuse of process, can prejudice the rights not only of specific defendants, but, especially in election cases, voters and citizens who would be affected by tardy adjudication of the claim. In the present case, the harm from Utah plaintiffs' inexplicable delay in raising its claims challenging imputation would reach all voting citizens of North Carolina and their candidates for the 2002 elections.

**1. Plaintiffs' Lack of Diligence in Filing This Complaint Is Unexplained and Inexcusable.**

Knowing that time was of the essence and that the positions of the States of North Carolina and Utah would be irrevocably changed once the President reported the apportionment calculation and the Clerk of the House of Representatives certified the apportionment to the States, Utah in *Evans I* dropped its requests for a temporary restraining order and preliminary injunction, dropped the House Clerk as a defendant, and, despite full knowledge of the issue, did not challenge the Census Bureau's imputation procedures in its initial complaint (January 10, 2001); first amended complaint (January 16, 2001), or second amended complaint (January 30, 2001).

There is no explanation for plaintiffs' lack of diligence. In *Evans I*, the court rejected plaintiffs' implausible claim of not having learned about the allegedly impermissible imputation

until April 9, 2001.<sup>6</sup> See Order, *Evans I* (Exhibit B). Under the circumstances of this case, Utah plaintiffs' delay from January to April in challenging imputation is fatal to their claim. As the Supreme Court of the United States stated in *Patterson v. Hewitt*, 195 U.S. 309, 319 (1904): "Indeed, in some cases the diligence required is measured by months rather than by years." See also *Texas Co. v. Herring*, 19 F.2d 56, 59 (8th Cir. 1927) ("the lapse of time which will induce the court to apply the doctrine may be longer or shorter, depending on the circumstances of the particular case"); *Kansas City Southern Ry. Co. v. May*, 2 F.2d 680, 688 (8th Cir. 1924) (laches not "dependent upon mere lapse of time").

Because of the time-sensitive nature of elections - - and apportionment is an important and necessary aspect of the election process - - any claims against election procedures must be expressed expeditiously. E.g., *Williams v. Rhodes*, 393 U.S. 23, 34-35 (1968); *Fulani v. Hogsett*, 917 F.2d 1028, 1031 (7th Cir. 1990), *cert. denied*, 501 U.S. 1206 (1991). A delay of as little as a few months can be inexcusable. See *Citizens for the Scenic Severn River Bridge, Inc. v. Skinner*, 802 F. Supp. 1325, 1342 (D. Md. 1991), *aff'd* 972 F.2d 338 (4th Cir. 1992) (delay of approximately ten months); *Libertarian Party v. Davis*, 601 F. Supp. 522, 525 (E.D. Ky. 1985) (delay of three months from constructive knowledge and one and one-half months from actual knowledge); *Dobson v. Mayor & City Council of Baltimore*, 330 F. Supp. 1290, 1301-02 (D. Md. 1971) (delay of three and one-half months).

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<sup>6</sup> Utah plaintiffs offered the excuse that their Congressman had not received the imputation data until April 9, 2001; but that information would have been available to the Congressman on December 28, 2000, when the apportionment count was provided to the President or to the plaintiffs through discovery.

Similarly, Congress has recognized the time-sensitive nature of apportionment. The reapportionment process is “virtually self-executing” so that the number of Representatives allotted to each State is determined by the President and certified to the States on a rapid time line. *Franklin v. Massachusetts*, 505 U.S. 788, 791-92 (1992). The President must transmit the apportionment calculation to Congress “on the first day, or within one week thereafter, of the first regular session” after the census, 2 U.S.C. § 2a(a), and the Clerk of the House must certify the apportionment to each State within 15 days. 2 U.S.C. § 2a(b). The Census Bureau must provide the States their redistricting data by April 1. 13 U.S.C. § 141(c) (2001). Congress also attempted to encourage expeditious challenges to the Census Bureau’s planned use of statistical sampling or statistical adjustments prior to the taking of the 2000 census. *See* Pub. L. 105-119, Title II, § 209, 111 Stat. 2480 (Nov. 26, 1997) (allowing civil action before three-judge panel to challenge census dress rehearsal or Census Bureau’s report of its Census 2000 Operational Plan). Section 209 also requires such actions to be heard on an expedited basis in the district court and provides for an accelerated appeal to the Supreme Court of the United States. *Id.* § 209(e). The purpose of § 209 was to allow challenges to the census plan *before* the census occurred because “it would be impracticable for the States to obtain, and the courts of the United States to provide, meaningful relief after such enumeration has been conducted.” *Id.* § 209(a)(8).

Because the Utah plaintiffs knew about the Census Bureau’s imputation procedures in January when they brought their first challenge to the apportionment of Representatives, their failure to explore or raise the issue until several months later satisfies the first requirement, lack of diligence, for dismissing their current challenge on the grounds of laches.

**2. Plaintiffs' Delay Prejudices the North Carolina Intervenors and the Citizens of North Carolina.**

Plaintiffs' failure to proceed expeditiously with their claim operates to the substantial prejudice of North Carolina's congressional delegation (all of whom have intervened as defendants in this action) and the voting public of North Carolina. North Carolina's Governor has received certification that the State has been apportioned thirteen Representatives, and the North Carolina General Assembly, in reliance on that certification, is in the process of enacting a new congressional plan.<sup>7</sup> By the time this Court can hear this case and make its determination, even on the expedited schedule agreed to by the parties, a new congressional plan will have been enacted and submitted to the United States Department of Justice for Preclearance under § 5 of the Voting Rights Act. Bartlett Decl. ¶ 4. Even without disruption, the time-line for North Carolina to receive the redistricting data, enact a plan, and obtain Voting Rights Act preclearance leaves little margin for error.

Indeed, the inexorable march to elections will have begun before this case can be resolved by the courts. North Carolina's candidate filing period begins on the first Monday in January, and the primary will be held on May 7, 2002. Bartlett Decl. ¶¶ 3, 6. Long before the candidate filing period begins, candidates need to know the configurations of the State's congressional districts. Candidates need time to assess their prospects, such as political and grassroots support, fund raising potential, and ability to communicate with the voters. Bartlett Decl. ¶ 5. Without adequate time to assess new districts, potential candidates may forego seeking election. Past experience also has

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<sup>7</sup> It is anticipated that the new districts will be finalized in July or August before the General Assembly recesses for the year. Bartlett Decl. ¶ 3.

shown that a disruption to the congressional primaries, requiring a stand-alone fall primary, reduces voter turnout to abysmal levels. It also detrimentally impacts the turnout for the other state and federal primary elections, which must proceed as scheduled without the congressional elections. Bartlett Decl. ¶ 7.

The need to put district boundaries in place and to allow elections to proceed in a timely manner has been recognized by Congress: it requires Congressional apportionment to be certified to the States in January and that redistricting data be provided to the States by April 1. For the elections to proceed on schedule, challenges to the apportionment must be immediate. Because of the Utah plaintiffs' delay in challenging the Census Bureau's well-established imputation methodology, *see* Argument II, *infra*, no relief can be granted to Utah without substantial prejudice to North Carolina, if relief can be granted at all.<sup>8</sup> The virtually self-executing process of apportionment has already occurred and cannot be undone by the courts.

Although the constitutional and statutory claims raised by the plaintiffs lack merit on substantive grounds, *see* Arguments II and III, *infra*, their failure to bring their claim in a timely manner is inexplicable and prejudicial. The Utah plaintiffs' claims lack the vigilant assertion necessary in an apportionment or election controversy. As a result of plaintiffs' neglect, the relief they seek would prejudice the State of North Carolina and its voters to a point that the action should be barred pursuant to the doctrine of laches.

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<sup>8</sup> The Utah plaintiffs declined to bring their current claim in *Evans I* and dropped their request for a temporary restraining order or preliminary injunction against the Clerk of the House of Representatives. The apportionment of thirteen Representatives was certified on January 16, 2000, and is a *fait accompli*.



## II. IMPUTATION IS NOT “SAMPLING” PROHIBITED BY THE CENSUS ACT.

In *Department of Commerce v. House of Representatives* the United States Supreme Court held that the Census Bureau’s proposed use of statistical sampling in the 2000 census to determine populations for the purposes of apportioning congressional seats among the States violated § 195 of Title 13 of the Census Act (hereinafter “§ 195”). 525 U.S. 316, 334 (1999). The Court specifically did not deal with “imputation,” *id.* at 352, which, as shall be shown below, is not statistical sampling. Imputation is a method of coping with missing or incomplete data. It is applicable in cases in which missing data are known or reasonably believed to be correlated with the observed or known data, and it capitalizes on that correlation to produce plausible values for the missing data. See Declaration of David W. Peterson, Ph.D. (hereinafter “Peterson Decl.”) ¶ 10, 6 as Exhibit C. Imputation, as the term is used by the Census Bureau, refers to:

providing responses for missing items by using not only other information for the person or household, but also information from other, similar persons or households.

CONSTANCE F. CITRO, *Editing and Imputation*, in *ENCYCLOPEDIA OF THE U.S. CENSUS* (Margo J. Anderson ed., CQ Press), at 195-96 (A.R. C 00428-430). The specific method of imputation used in the 2000 census to obtain a more complete count is called hot deck imputation:

Hot decks are distributions of values that are constantly altered as questionnaires are processed and data for the latest person or housing units are substituted for the values already in the hot deck matrix. Imputation (allocation) of a missing entry is made from the latest value stored in the matrix that fits other known characteristics of the person or housing unit. For example, a person reported as a twenty-year-old male relative for whom marital status was not reported would be allocated the same marital status as the latest such person processed. When no information is available about the persons in a housing unit, people in a previously processed housing unit are selected as a substitute, and all their basic (short-form) characteristics are duplicated. (When it is not known whether a housing unit is occupied or vacant, an imputation is first performed to assign occupancy status.)

*Id.* at 196.<sup>9</sup>

Imputation is not random or statistical sampling, and is not, therefore, prohibited by the Census Act or the Court's opinion in *House of Representatives*. In this argument, North Carolina will show that imputation is not random or survey sampling, and, based on the legislative history of the enactment of § 195 of the Census Act, is not a methodology Congress has prohibited for purposes of determining apportionment in the House of Representatives.<sup>10</sup> North Carolina will then establish that when the Supreme Court reviewed the legislative history of § 195 in *House of Representatives*, it determined only that the Act prohibited the use of "statistical sampling" in the manner proposed by the Census Bureau for the 2000 Census. The statistical sampling the Court found to be prohibited by § 195 involves random selection, which bears no relationship to imputation. For these reasons, the federal defendants and North Carolina intervenors are entitled to summary judgment dismissing plaintiffs' claim under the Census Act.

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<sup>9</sup> A more complete discussion of imputation as used by the United States Bureau of Census is contained in the Affidavit of Barbara A. Bailar, *Orr v. Baldrige*, No. IP-81-604-C. (S.D. Ind.) (February 7, 1982) (hereinafter "Bailar Aff."), attached as Exhibit D; and the declaration provided by the Census Bureau (hereinafter "Census Bureau Decl."), which is being filed by the federal defendants in support of their motion and memorandum. *See also* Bureau of Census, United States Department of Commerce Memorandum for Dennis W. Stoudt from Donna Kostanich, DSSD Census 2000 Procedures Series, Q-34, *Census 2000 Specifications for Imputing Housing Unit Status and Population Counts* (September 26, 2000) (A.R. C00858-86) (hereinafter "Mem. Q-34"); Bureau of Census, United States Department of Commerce Memorandum for Howard Hogan from Donna Kostanich, DSSD Census 2000 Procedures and Operations Memorandum Series B-17, *Census 2000 - Missing Housing Units Status and Population Data* (February 28, 2001) (A.R. C 01010-28) (hereinafter "Mem. B-17").

<sup>10</sup> 13 U.S.C. § 195 (2001) provides: "[e]xcept for the determination of population for purposes of apportionment of Representatives in Congress among the several States, the Secretary shall, if he considers it feasible, authorize the use of the statistical method known as 'sampling' in carrying out the provisions of this title."

## **A. THE HISTORY OF “SAMPLING” AND IMPUTATION**

### **1. 1957 Legislative History**

Congress first addressed the issue of “sampling” with respect to the census in 1957, when the Secretary of Commerce requested an amendment to the Census Act to permit the Census Bureau to use statistical sampling in gathering various components of census information. *See* Amendment of Title 13, United States Code, Relating to Census: Hearing on H.R. 7911 before the House Committee on Post Office and Civil Service, 85<sup>th</sup> Cong., 1<sup>st</sup> Sess., 4-8 (June 19, 1957) (hereinafter “June 1957 Hearing”). This resulted in the enactment of the original version of § 195, where the first reference to “sampling” in the Census Act occurs: “except for the determination of population for apportionment purposes, the Secretary may, where he deems it appropriate, authorize the use of the statistical method known as ‘sampling’ in carrying out the provisions of this title.” 13 U.S.C. § 195 (1970). At that time, the section authorized what had come to be known as the “long form” - - a lengthy set of supplemental questions that had been posed during the 1940 and 1950 decennial censuses to a randomly selected sample of the population. *See House of Representatives*, 525 U.S. at 337, 351.

The term “sampling” is not defined in the Census Act. The legislative history, however, demonstrates that Congress was using the term in its most commonly understood form - - the selection of a random sample and the use of that sample to make inferences about the overall qualities of the population from which it was drawn. The Statement of Purpose and Need and Sectional Analysis accompanying the 1957 legislation to amend the Census Act, describes the “sampling” authorized by new § 195 as “sample surveys”:

The use of sampling procedures would be authorized by the proposed new Section 195. It has generally been held that the term “census” implies a complete enumeration. Experience has shown that some of the information which is desired in connection with a census could be secured efficiently through a sample survey which is conducted concurrently with the complete enumeration of other items; that in some instances a portion of the universe to be included might be efficiently covered on a sample rather than a complete enumeration basis and that under some circumstances a sample enumeration or a sample census might be substituted for a full census to the advantage of the government.

June 1957 Hearing, at 7. *See also* H.R. Rep. No. 85-1043, at 10 (1957) (purpose of § 195 in authorizing the use of sampling procedures is to “permit the utilization of something less than a complete enumeration, as implied by the word ‘census,’ when efficient and accurate coverage may be effected through a sample survey”). These explanations denote nothing more than the commonly understood method of random or probability sampling. *See* Peterson Decl. ¶¶ 14,16. Similarly, at another hearing on the amendments to the Census Act, Dr. A. Ross Eckler, the Deputy Director of the Census Bureau, notes that following the 1950 census, the Bureau engaged in “testing work to determine the accuracy of the various figures obtained [on income received by individuals] by means of small samples.” Amendment of Title 13, United States Code: Hearing on H.R. 7911 before the House Subcommittee of the Committee on Post Office and Civil Service, 85 th Cong., 1<sup>st</sup> Sess., 19 (July 25, 1957). Dr. Eckler’s description is consistent with the circumstance in which a sample is drawn using random sampling or some close variation, and the characteristics of the sample are projected to the population as a whole. Peterson Decl. ¶ 16.

In their testimony that year regarding the census budget, the Census Bureau Director and Deputy Director provided Congress several examples of “sampling” procedures used to collect information about such matters as foreign trade statistics, occupation and industry, transportation, and passenger travel statistics. These examples all relate to a kind of probability “sampling”

intended by § 195 - - a scientifically drawn random sample whose characteristics are to be extrapolated to the population as a whole.

- ▶ *Foreign Trade Statistics* - - “The proposal is to increase the sample from 10 to 50 percent of the small-dollar-value transactions.” Department of Commerce and Related Agencies Appropriations for 1958: Hearings before the Subcommittee of the Committee on Appropriations, 85<sup>th</sup> Cong., 1<sup>st</sup> Sess., 686 (March 20, 1957).
- ▶ *Occupation and Industry* - - “[T]he information the enumerator gets in the field about what the occupation of each person is, and what industry he works in, calls for a tremendous amount of detailed review before it is summarized. If we can find, say, that a 25-percent sample gives accurate results for what is wanted, we have cut down work to an important extent.” *Id.* at 679.
- ▶ *Transportation* – The Program for a Census of Transportation “largely will use sampling methods”, “some of the samples we have to get month by month as we go along.” *Id.* at 699.
- ▶ *Passenger Travel* - - [Mr. Flood:] “Why household samplings? Are you going to have enumerators running around doing that?” [Mr. Burgess:] We are regularly canvassing households, 35,000 a month for employment and unemployment figures. We can take on another question or two.” *Id.* at 701.

These examples from the committee hearing evoke nothing other than the random drawing of samples, using a probability sampling technique, and then using the samples to estimate characteristics of the populace overall. Peterson Decl. ¶ 17. The explanations of “sampling” that appear in the legislative history of the 1957 enactment of § 195, point to Congress’ use of the term in its most common and ordinary sense - - some form of probability sampling involving random selection. Thus, when Congress originally exempted apportionment from its authorization of “sampling,” it understood sampling to refer to a method designed to promote efficiency in which information about a whole population was derived from a smaller survey as a “substitute [] for a full census.” See H.R Rep. No. 85-1043, at 7.

It is clear that the “sampling” referred to by Congress when it enacted § 195 in 1957 was something quite different from imputation. Although imputation had been used by the Census Bureau in 1940 and 1950 for purposes of supplying missing data regarding characteristics of persons who had been enumerated, *see* Defendants’ Response to Interrogatory No. 1, pp. 10-11,<sup>11</sup> nothing in the legislative history suggests that the term sampling was intended to be construed so broadly as to reach the Bureau’s imputation procedures or that imputation was of any concern to Congress.

## **2. 1976 Legislative History**

In 1976, Congress amended § 195 to provide that “the Secretary *shall*, if he considers it feasible,” use sampling. (Emphasis added.) The “except” clause still prohibited the use of sampling for apportionment purposes. The primary focus of the 1976 amendments related to the issue of authorizing a mid-decade census, although other amendments, such as the one to § 195, also were debated. *See* H.R. Rep. No. 94-944 (1976). The purpose of the amendment to § 195 was described as directing the Secretary of Commerce “to use sampling and special surveys in lieu of total enumerations.” *Id.* at 1.

It is clear from the legislative debate that the sampling and special surveys referred to in the legislative history were meant to refer to the conventional practice of probability sampling using random selection. Congresswoman Pat Schroeder notes that the bill “directs the Secretary of

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<sup>11</sup> On June 4, 2001, the federal defendants responded to interrogatory and document requests from the plaintiffs with Defendants’ Objections and Responses to Plaintiffs’ Revised First Set of Interrogatories and Request for Production of Documents. Interrogatory No. 1 requested a list of “all instances in which the Census Bureau has supplemented the apportionment count in any decennial census with estimates derived through the use of statistical imputation.” The Defendants’ Interrogatory No. 1 response, a copy of which is attached as Exhibit E, describes the Census Bureau’s use of imputation for each decennial census from 1940 through 2000.

Commerce to use sampling methods rather than 100 percent questionnaires whenever feasible.” *See* 121 Cong. Rec. 7,9792. With regard to the mid-decade census, Congresswoman Schroeder indicates that “the committee has rejected the idea of simply using updated population estimates or even a 25 percent across-the-board sample survey.” *Id.* In similar remarks in October, Congresswoman Schroeder again describes the purpose of the amendments to § 195 to “direct the Secretary of Commerce to use sampling methods rather than 100 percent questionnaires whenever feasible.” 121 Cong. Rec. 24,35171. Nothing in those remarks or their contexts suggest that the term “sampling” was intended to extend beyond the usual meaning of the term - the drawing of a sample by standard techniques and using the sample to project to the population of a whole. Peterson Decl. ¶¶ 18, 19.

The Senate Report on the legislation authorizing a mid-decade census and other Census Act amendments also discusses the use of sampling in the same conventional sense:

- ▶ The purpose of the legislation is “to direct the Secretary of Commerce to use sampling and special surveys in lieu of total enumeration.”
- ▶ A mid-census “survey designed to include only 25 percent of the Nations’ population . . . would not be nearly so useful” as a full census.
- ▶ New language is added “to encourage the use of sampling and surveys in the taking of the decennial census” and “for the sake of economy and reducing respondent burden.”
- ▶ “The Secretary may use statistical techniques such as sampling and surveys to produce current, comprehensive and reliable data.”

S. Rep. No. 94-1256 (1976), *reprinted in* 1976 U.S.C.C.A.N. 5463, at 1, 3, 4, 5 respectively. *See also* Peterson Decl. ¶ 20.

When the 1976 amendment to § 195 was enacted, Congress had the same narrow understanding of sampling as it did in 1957, which did not include imputation. After all, by that



time, there had been two more censuses using imputation without a hint of protest from Congress. In 1960, in addition to imputing “characteristics for persons known to exist in occupied households but for whom no characteristics information was available, (a process generally referred to as substitution),” the Bureau also imputed “the number of occupants for housing units known to be occupied but for which there was no population information (followed by substitution of a full set of characteristics for the added persons).” Defs.’ Resp. to Interrog. No. 1, pp. 12-13 (Exhibit E).

The rationale for the imputation of the missing data is explained as follows:

In general, the missing data were taken from the previously processed schedule, which usually represented a neighboring housing unit. This methodology was designed to take advantage of neighboring unit correlations, *i.e.*, the tendency of households within a small geographic area to be similar in most characteristics, which have been shown to exist in the population. For example, if a schedule could not be read by FOSDIC (Film Optical Sensing Device for Input to Computers), the previously processed schedule, including the number of occupants, was substituted for the illegible one. When no data were reported for a housing unit that was reported to be occupied, data for persons in the previously processed occupied housing unit were substituted for the missing data. In 1960, the Bureau reported that ‘[p]ersons substituted’ due to ‘noninterview’ or ‘mechanical failure’ were responsible for 0.5 percent of the total U.S. census count.

*Id.* (citations omitted).

In the 1970 census, the Bureau used similar editing and imputation techniques as those used in the 1960 census, adding about 900,000 persons to the apportionment count. *Id.* at 13-14. However, additional procedures known as the National Vacancy Check and the Post Enumeration Post Office Check, which combined sampling techniques with imputation, were also used. *Id.* at 14-15. The random sampling aspects of these procedures correlate to the common understanding of the term sampling. These sampling procedures were not used in any subsequent censuses. *Id.*



Although the practice of imputation was no secret to Congress in 1976, the legislative record contains no condemnation of the Bureau's use of imputation to obtain a total enumeration of the population. Plaintiffs have not pointed to a shred of legislative history suggesting Congress ever affirmatively intended to bar imputation as an improper method for dealing with missing data. In light of this history, there is no basis for construing the prohibition on "sampling" for apportionment purposes contained in § 195 to apply to imputation.

#### **B. IMPUTATION IN THE 1980 CENSUS**

In the decennial census immediately following the 1976 amendment to § 195, the Census Bureau again utilized imputation procedures to fill in "missing characteristics," as well as "to assign a population count to units known to be occupied but for which the number of occupants had not been obtained." Defs.' Resp. to Interrog. No. 1, pp. 15-16 (Exhibit E). "Imputation was also used to assign a status (vacant/occupied) and then a population count to housing units that had not been classified as either vacant or occupied during field operations." *Id.* at 16.

As before, imputation of a population count or occupancy status was based on geographic proximity. As household data were processed sequentially, the new data were stored sequentially in a file. When occupancy or population data were incomplete, the computer referred to this sequential file, or "hot deck," to obtain data from the most recently processed housing unit.

*Id.* Approximately 761,000 persons were added to the final apportionment count through imputation in the 1980 census. *Id.* See also Bailar Aff. (Exhibit D).

The number of persons added to the apportionment count in 1980 was sufficient to shift the allocation of a Representative from Indiana to Florida, and, not surprisingly, resulted in litigation.

*Orr v. Baldrige*, No. IP 81-604-C (S.D. Ind.) (1986).<sup>12</sup> Specifically, Indiana challenged the hot deck method used by the Census Bureau to impute occupancy status and number of residents of existing housing units for which data otherwise could not be obtained. *Orr* at 2. Although Indiana challenged the Bureau's imputation methodology as a violation of the Census Act, the plaintiffs conceded at the outset that hot deck imputation is not sampling barred by § 195. The Indiana plaintiffs and the court understood that the "sampling" delimited by § 195,

is the selection of a subset of units from a larger population in such a way that each unit of the population has a known chance of selection. Sampling is used where a scientifically selected set of units can be used to represent the entire population from which they are drawn.

*Orr* at 5.

From this explanation it is clear that immediately after Congress' 1976 amendment to § 195, plaintiffs and the court accepted that Congress was using the term "sampling" in its commonly understood sense - - the use of a subset of the population randomly selected to represent the whole. By contrast, imputation "is a procedure for determining a plausible value for missing data." *Orr* at 5. Congress apparently agreed with the *Orr* court's reasoning, for the Census Act has not been subsequently amended to prohibit the Census Bureau from continuing to use imputation procedures to cope with missing data and to improve the accuracy of the apportionment count.

### C. INTERPRETATION OF § 195 IN HOUSE OF REPRESENTATIVES.

The proposed statistical sampling methods considered by the Court in *House of Representatives* and found violative of the Act's prohibition against "sampling" were examples of

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<sup>12</sup> A copy of the court's July 1, 1985 Order and unreported memorandum opinion dismissing Indiana's challenge to the Census Bureau's method of hot deck imputation is attached as Exhibit F, and will be referenced hereinafter as "*Orr* at \_\_\_\_."

probability sampling using random selection techniques. The first statistical sampling proposal the Court was the Nonresponse Followup program. Under this program, the Bureau would visit “a randomly selected sample of nonresponding housing units, which would be ‘statistically representative of all housing units in [a] nonresponding tract,’” and would then use this information “to estimate the characteristics of the remaining 100 nonresponding units on which the Bureau has no information.” 525 U.S. at 324-25. The second proposed statistical sampling procedure reviewed by the Court is known as Integrated Coverage Measurement. This procedure required the Bureau to classify each of the country’s seven million census blocks into strata defined by the characteristics of each block. The Bureau would then “select blocks at random from each stratum, for a total of 25,000 blocks, or an estimated 750,000 housing units” for purposes of conducting interviews “to determine the ‘true’ situation in the home.” *Id.* at 325. This data produced estimation factors that “would be applied to the initial enumeration to estimate the total population.” *Id.* at 326.

These procedures are classic examples of a simple random sample and a stratified sample. *See* Peterson Decl. ¶ 7. The statistical sampling procedures which the Court found violative of the Census Act evoke no more than the conventional form of sampling, namely the design and collection of a sample according to generally accepted probabilistic techniques, and then the use of the sample to estimate overall qualities and size of the population from which it was drawn. *See* Peterson Decl. ¶ 21.

Because the Supreme Court was addressing the statutory term “sampling,” and the challenged procedures fell squarely within the commonly understood meaning of sampling, involving random selection techniques, the *House of Representatives* opinion offers no guidance on imputation. Plaintiffs attempt to overcome this fatal weakness in their argument by conveniently attempting to

offer what they hope is an all-inclusive enough definition of sampling with which they can persuade the Court that *House of Representatives* speaks to imputation as well as sampling. See Peterson Decl. ¶ 3. However, plaintiffs offer no legislative history or circumstances which suggest that Congress used the word “sampling” in a manner different from its commonly understood sense: random sampling. The weight of the legislative record shows Congress intended that random sampling and sample surveys would not be used to adjust the apportionment count, but Congress has not barred the Census Bureau from improving the accuracy of the count with its long-standing process of editing and filling in missing data by imputation in order to produce a more complete enumeration.

As explained by Dr. Peterson, plaintiffs’ proffered definition of sampling goes too far in that its logical extension would be to ban the census itself. The portion of the target population counted in the 2000 Census, through means other than imputation, is itself but a sample. It is a so-called convenience sample consisting of those members of the target population who are relatively easy to tally correctly, either by mail or other direct means. See Peterson Decl. ¶ 22. Congress, of course, did not mean to outlaw “sampling” in such an all-encompassing manner as plaintiffs would like to suggest, for it logically would follow that it was outlawing any census that did not result in a total and perfect enumeration.

Lacking any legislative or census history to support their argument that Congress’ use of the term “sampling” encompasses imputation, plaintiffs point to the Bureau’s REPORT TO CONGRESS -- THE PLAN FOR CENSUS 2000, BUREAU OF THE CENSUS, UNITED STATES DEPARTMENT OF

COMMERCE.<sup>13</sup> In the Report, there is a section on the use of scientific sampling to increase accuracy.

*Id.* at 23. The Report defines sampling in the manner reflected by the 1957 and 1976 legislative record:

In our common experience, “sampling” occurs whenever the information on a portion of a population is used to infer information on the population as a whole. We use samples every day to characterize a larger group -- for manufacturing quality checks, for medical tests, for determining air and water quality, and for conducting audits, to name a few. In laymen’s terms, a “sample” is taken whenever the whole is represented by less than the whole. Among professional statisticians, the term “sample” is reserved for instances when the selection of the smaller population is based on the methodology of their science. The sampling proposed for Census 2000 [the Nonresponse Fellowship and Integrated Coverage Measurement Program] is scientifically based; improves accuracy; eliminates the traditional undercount of children, renters and minorities; and saves money.

*Id.* The report also discusses reliance on sampling in previous censuses, specifically describing the National Vacancy Check used in 1970, in which imputation was combined with ordinary random sampling to provide a more accurate enumeration. However, except for the 1970 census, the Report’s references to imputation refer to it as a “statistical method,” not as sampling:

Census 2000 will not be the first time that the Census Bureau has used statistical methods to correct for problems in physical enumeration and to provide a more accurate final result. Since at least 1940, statistical imputation has been used when an enumerator knew that a housing unit was occupied, but could not obtain information on the number of people living in that unit. In 1980, statistical imputation raised the physical enumeration total by 761,000 people. The number and rate of people imputed in the 1990 Census was only 53,590. Automated data control systems and field procedures may have discouraged enumerators from turning in incomplete questionnaires. In 1970, the Census Bureau used sampling to impute people to addresses that had initially been assumed vacant. The sample of 13, 546 housing units initially presumed “vacant” found that 11.4 percent of them should be

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<sup>13</sup> The version of the Report referenced by plaintiffs was originally issued July 1997 and was revised and reissued August 1997. A copy of the Report has been filed by the federal defendants as A.R. C 00126-342.

reclassified as “occupied.” The National Vacancy Check added 1,068,882 people, or 0.5 percent of the total, to the 1970 Census.

Apart from the population totals, the Bureau has historically used statistical methods extensively to make up for incomplete census information. For example, information is asked about each individual’s age, sex, and race. Established statistical methods were used to infer missing information.

*Id.*

#### **D. VALIDITY OF IMPUTATION IN THE 2000 CENSUS**

Imputation is a well-known and widely used procedure in connection with conducting surveys and censuses:

Imputation is a method for coping with survey data that are only partially complete. It is applicable in cases in which the missing data are known (or reasonably believed) to be correlated with the observed or known data, and it capitalizes on that correlation to produce plausible values for the missing data. Imputation is not an alternative to simple random sampling; it is a procedure with a different purpose directed to solving a different problem.

Peterson Decl. ¶ 10. Plaintiffs’ expert Dr. Donald B. Rubin devotes a section of his book written with Roderick J. A. Little, *STATISTICAL ANALYSIS WITH MISSING DATA* (Wiley 1987), to imputation, including a discussion of the “nearest-neighbor form of hot deck imputation used by the Bureau of Census in the 2000 census.” Peterson Decl. ¶ 10. The imputation process used by the Census Bureau in the 2000 census differs from the common concept of statistical sampling in at least two ways: (1) it is a deterministic process that does not involve random selection; and (2) the process focuses on the assignment of data values to individual members of the population, rather than to estimation of overall population parameters. Peterson Decl. ¶ 9.

In taking a census, what is called “nonresponse” is inevitable since it is not possible to achieve perfection; hence, techniques to handle missing data are necessary.

The first point is to recognize that when data are missing, imputation must take place, either implicitly or explicitly. If the result of the survey are to be used at all, the analyst or consumer is compelled to draw conclusions about missing evidence. It is not a question of whether to impute, but how.

W. R. SIMMONS, *Operational Control of Sample Surveys*, in LABORATORIES FOR POPULATION STATISTICS, Series No. 2 (The University of North Carolina 1972); *see also* Bailar Aff. (Exhibit D).

As the court in *Orr* recognized when it addressed the issue of using hot deck imputation in a situation where the occupancy status and/or the number of people in a unit could not be determined,

[t]he Bureau then had the task of selecting a method for dealing with the problem of unclassified units so as to minimize distortion in the population counts. The alternatives, [ ] ignoring the units or tabulating them as “not reported,” is the equivalent of imputing zero or no persons in the unclassified units. This would result in an undercount of the population because some of the classified units were known to be occupied.

*Orr* at 4.

In the 2000 census, in addition to imputation for missing characteristics, three types of imputation procedures were used for housing units: (1) units defined as occupied but with no population count; (2) “unclassified” units known to exist, but whose occupied or vacant status is unknown; and (3) “unclassified” units for which nothing is known: occupied, vacant or delete status. *See* Mem. Q-34. The last category was new for the 2000 census and has been improperly and dysphemistically labeled as “phantom” houses by the plaintiffs. Nothing could be farther from the truth. This last category of housing units are all units which at some point in time were reported to exist and thus appear on the master address list. Because there is a basis to believe these units exist, they are not arbitrarily classified for deletion; however the imputation process may result in their being deleted or imputed as vacant or occupied. *See* the Census Bureau Declaration filed by the federal defendants in support of their motion and memorandum for a more complete explanation.

The reasonableness and necessity of the nearest neighbor imputation process is born out by the number of persons imputed in the 2000 census. Across the United States, while 87.3 percent of “classified” units were occupied, 8.4 percent were vacant, and 4.3 percent were delete. Mem. B-17 at 4. For the imputed units, this distribution is significantly different: 56.2 percent were imputed as occupied, while 34.2 percent were imputed as vacant, and 9.6 percent were imputed as delete. *Id.* There were significantly higher percentage rates of unclassified units imputed as vacant and delete compared to classified units. This demonstrates that the imputation process adds to the census count at a very conservative rate when data is missing for housing units which can reasonably be expected to exist and to be occupied.

The exercise of judgment by the Secretary of Commerce and the Census Bureau regarding complex census matters requires significant deference. The Constitution vests Congress with virtually unlimited discretion in conducting the decennial census, and through the Census Act, Congress has delegated its broad authority over the census to the Secretary. *Wisconsin v. City of New York*, 517 U.S. 1, 19-20 (1996). Based on the Constitution’s broad grant of authority, the Secretary’s decision on the conduct of the census must be consistent with the “constitutional goal of equal representation” and “need bear only a reasonable relationship to the accomplishment of an actual enumeration.” *Id.* at 20.

Given the fact that imputing all missing data as a zero recognizably diminishes the accuracy of the total enumeration, plaintiffs have not established that the remedy they seek, elimination of all imputed persons, will somehow enhance the accuracy of the census. Utah plaintiffs seek to erase 32,457 North Carolinians whom the Census Bureau reasonably believe to exist; they would also



erase 5,395 Utahns. *See* Table 3, attached as Exhibit G.<sup>14</sup> Because the imputation of these citizens is reasonably grounded on known data, plaintiffs have not demonstrated that imputation produced either an incorrect census count, or a count that is less distributively accurate than one not using imputation. The use of imputation is consistent with the goal of equal representation and bears more than a reasonable relationship to the accomplishment of an actual enumeration.

Finally, plaintiffs' challenge to imputation under the provision of § 195 cannot be buttressed by the doctrine of constitutional doubt. As we show in Argument III, *infra*, there is no serious argument that imputation violates the direction of the Census Clause of the Constitution for an actual enumeration. For this reason, the statutory analysis of the Census Act should not be skewed by an effort to avoid reaching the constitutional issue. *See Almendarez-Torres v. United States*, 523 U.S. 224, 238-39 (1998) (doctrine of constitutional avoidance need not apply "where a constitutional question, while lacking an obvious answer, does not lead a majority gravely to doubt that the statute is constitutional.").

Imputation is a well known and widely used procedure with a rational scientific basis which improves the quality and accuracy of the census enumeration. It is a deterministic process that does not involve random selection, and is not, therefore, prohibited by the Census Act. Plaintiffs' motion for summary judgment under the Census Act cannot be sustained and must be dismissed, with entry of summary judgment in favor of the North Carolina intervenors and federal defendants.

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<sup>14</sup> In its June 4, 2001 discovery response to Plaintiffs' Revised First Set of Interrogatories and Request for Production of Documents, Interrogatory No. 4, the federal defendants produced Table 3, which displays the total number of persons imputed in the 2000 census.

### III. THE CONSTITUTION DELEGATES TO CONGRESS COMPLETE AUTHORITY TO DIRECT HOW THE CENSUS SHALL BE TAKEN.

In *House of Representatives*, Justice O'Connor, writing for the five-member majority, concluded that the Census Bureau's plan to use statistical sampling to supplement the apportionment count violated § 195 of the Census Act. 525 U.S. at 342-43. The Court's holding was based entirely on the Act without regard to whether sampling would violate Art. 1, § 2, cl. 3 ("the Census Clause") of the Constitution. The four-member concurring opinion of Justice Scalia and the four-member dissenting opinion of Justice Stevens, however, did attempt to interpret the meaning of the phrase "actual Enumeration" in the Enumeration Clause. Justice Scalia declared that, in his opinion, it was "unquestionably doubtful whether the constitutional requirement of an 'actual Enumeration,' Art. I, § 2, cl. 3, is satisfied by statistical sampling." *Id.* at 346. Justice Stevens disagreed. In his view, "[t]he words 'actual Enumeration' require post-1787 apportionments to be based on actual population counts, rather than mere speculation or bare estimate, but they do not purport to limit the authority of Congress to direct the 'Manner' in which such counts should be made." *Id.* at 363. Thus, the meaning of "actual Enumeration" remains undecided by the Court, but the records of the Constitutional Convention reveal that Justice Stevens' view is the correct one.

Art. 1, § 2, cl. 3 of the Constitution provides as follows:

Representative and direct Taxes shall be apportioned among the several States which may be included within this Union, according to their respective Numbers, which shall be determined by adding to the whole Number of free Persons, including those bound to Service for a Term of Years, and excluding Indians not taxed, three fifths of all other Persons. The actual Enumeration shall be made within three Years after the first Meeting of the Congress of the United States, and within every subsequent Term of ten Years, in such Manner as they shall by Law direct. The Number of Representatives shall not exceed one for every thirty Thousand, but each State shall have at Least one Representative; and until such enumeration shall be made, the State of New Hampshire shall be entitled to choose three, Massachusetts eight, Delaware

one, Maryland six, Virginia ten, North Carolina five, South Carolina five, and Georgia three.

The text of Art. 1, § 2, cl. 3 does not specify how the Census shall be conducted. That responsibility is left to Congress. The “actual Enumeration . . . shall be made in such Manner as [Congress] shall by Law direct.” The phrase “*actual* Enumeration” was chosen by the Framers to distinguish the initial allocation of representative by the use of a “conjectural ratio” of population from the “*actual*” enumeration, the taking of the census, that would take place after the meeting of the first Congress.<sup>15</sup> This enumeration would be based solely on population, determined as accurately as possible. Nothing in the records of the Constitutional Convention suggest that the adjective “actual” was meant to specify how the enumeration was to be accomplished. What the Framers provided was that composition of the first Congress would be apportioned on the basis of population estimates, but the “actual Enumeration,” *i.e.* the census, would follow within three years of the meeting of the first Congress.

The Constitutional Convention was convened by the Congress to revise the Articles of Confederation in order to strengthen the central government, because of the growing tendency of the States to act independently of one another and without regard to their common interests and needs. Congress, acting on a report drafted by Alexander Hamilton at the ineffectual convention in Annapolis, resolved to call a convention to meet in Philadelphia in May 1787 “for the sole and

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<sup>15</sup> The Committee of Detail of the Convention submitted a draft provision for the allocation of Representatives in the first Congress based on a “conjectural ratio” of the populations of the several States: “The House of Representatives shall, at its first formation, and until the number of citizens and inhabitants shall be taken in the manner herein after described, consist of sixty five members, of whom three shall be chosen in New Hampshire, eight in Massachusetts, . . . .” See 2 MAX FARRAND, RECORDS OF THE FEDERAL CONVENTION OF 1787, at 264 (1911), attached as Exhibits H and I.

express purpose of revising the Articles of Confederation.” SOL BLOOM, HISTORY OF THE FORMATION OF THE UNION UNDER THE CONSTITUTION, at 14-15, attached as Exhibit J. It became apparent to the delegates to the Convention that merely correcting the deficiencies of the Articles of Confederation could not be accomplished simply by amending them. A new form of government under a constitution would be required. Although cognizant of their limited commission, the Framers nevertheless undertook to draft a constitution, uniting the States under one national or federal government. *See generally* CATHERINE DRINKER BOWEN, MIRACLE AT PHILADELPHIA: THE STORY OF THE CONSTITUTIONAL CONVENTION MAY TO SEPTEMBER 1787 (1966) (hereinafter “BOWEN”).

Many contentious issues confronted the Framers, including: how the chief executive should be selected; whether his term would be for life or a number of years; how the national legislature would be elected; what powers would be ascribed to the legislature; whether the importation of slaves would be prohibited; whether the Legislature should have the power to override State legislation which conflicted with the authority of the federal government; and what degree of sovereignty the several States would retain. But, as every high school student of American history is taught, the most divisive issue confronting the Framers, and one that nearly ended the Convention, was how the States were to be represented in the national legislature. The Framers debated for weeks whether representation of States in the national legislature should be determined by population (or wealth) of the several States, as the Virginia plan proposed, or by States each having one vote, as in the Paterson plan. Ultimately, the Framers accepted the “Great Compromise,” proposed by Roger Sherman of Connecticut - - a bicameral legislature with the first branch (the

House of Representatives) based on population, and the second (the Senate), on equal representation of the States. BOWEN, at 84-86, 94-96, 185-87.

The determination of the proportionate composition of the House and how that determination should be accomplished in the future was submitted to the first Grand Committee. Having studied the matter, the committee proposed that the composition of the House be set at one Representative for every 40,000 inhabitants of each State.<sup>16</sup> 1 MAX FARRAND, RECORDS OF THE FEDERAL CONVENTION OF 1787, at 178 (1911) (hereinafter "FARRAND"). The population of the States was established by an estimation, which took into account the wealth (*i.e.* slaves) of the Southern States. Georgia was allowed an additional Representative because of the belief that her population was increasing so rapidly that she would be entitled to another member by the time Congress under the new constitution convened. 1 FARRAND, at 559-61.

The Framers having resolved how the allocation of Representatives in the House would be established and having decided that the initial composition, based on the "conjectural ratio" of population and wealth, would be set out in the constitution upon agreement of the Framers regarding the number of Representatives to be assigned to each State, debate centered on whether it should be left to the discretion of Congress to reapportion itself as the proportionate population of the several States should change from time to time. The committee proposed that "as the present situation of the States may probably alter as well in point of wealth as in the number of their inhabitants, that the

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<sup>16</sup> Madison later objected to the ratio as a permanent rule for assigning Representatives as having the potential to be "excessive." Gorham replied that there was nothing to worry about. "It is not to be supposed that the Govt will last so long as to produce this effect. Can it be supposed that this vast Country including the Western territory will 150 years hence remain one nation?" 2 FARRAND, at 221.

Legislature be authorized from time to time to augment ye. number of Representatives.” *Id.* at 559.<sup>17</sup>

Edmond Randolph of Virginia objected privately to leaving such discretion to the Legislature. *Id.* at 561.

As the Framers debated the committee report concerning the assignment of Representatives, Randolph proposed that “instead of leaving it in the discretion of the Legislature[,] to regulate the representation by a periodical census.” *Id.* at 567. He moved to amend the committee report to include the following language: “that in order to ascertain the alterations in the population & wealth of the several States[,] the Legislature should be required to cause a census, an estimate to be taken within one year after its first meeting; and every      years thereafter -- and that the Legislr. arrange the representation accordingly.” *Id.* at 570-71. Gouverneur Morris of Pennsylvania objected to the proposal “as fettering the Legislr. too much.” *Id.* at 571. George Mason of Virginia argued strenuously against leaving the matter to Legislative discretion, and following his argument, North Carolina’s Hugh Williamson offered an alternative to Randolph’s motion:

Mr. Mason. The greater the difficulty we find in fixing a proper rule of Representation, the more unwilling ought we to be, to throw the task from ourselves, on the Genl. Legislr. He did not object to the conjectural ratio which was to prevail in the outset; but considered a Revision from time to time according to some permanent & precise standard as essential to ye, fair representation required in the 1<sup>st</sup>. branch. According to the present population of America, the Northn. part of it had a right to preponderate, and he could not deny it. But he wished it not to preponderate hereafter when the reason no longer continued. From the nature of man we may be sure, that those who have power in their hands will not give it up while they can retain it. On the Contrary we know they will always when they can rather increase it. If the S. States therefore should have 3/4 of the people of America within their limits, the Northern will hold fast the majority of Representatives. 1/4 will govern the 3/4. The S. States will complain: but they may complain from generation

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<sup>17</sup> The spelling and punctuation of the quotes herein generally follow the original documents as contained in Farrand’s compilation of the notes of the convention.

to generation without redress. Unless some principle therefore which will do justice to them hereafter shall be inserted in the Constitution, disagreeable as the declaration was to him, he must declare he could neither vote for the system here nor support it in his State. Strong objections had been drawn from the danger to the Atlantic interests from new Western States. Ought we to sacrifice what we know to be right in itself, lest it should prove favorable to States which are not yet in existence. If the Western States are to be admitted into the Union as they arise, they must, he wd. repeat, be treated as equals, and subjected to no degrading discriminations. They will have the same pride & other passions which we have, and will either not unite with or will speedily revolt from the Union, if they are not in all respects placed on an equal footing with their brethren. It has been said they will be poor, and unable to make equal contributions to the general Treasury. He did not know but that in time they would be both more numerous & more wealthy than their Atlantic brethren. The extent & fertility of their soil, made this probable; and though Spain might for a time deprive them of the natural outlet for their productions, yet she will, because she must, finally yield to their demands. He urged that numbers of inhabitants; though not always a precise standard of wealth was sufficiently so for every substantial purpose.

Mr. Williamson was for making it the duty of the Legislature to do what was right & not leaving it at liberty to do or not do it. He moved that Mr. Randolph's proposition be postponed, in order to consider the following "that in order to ascertain the alterations that may happen in the population & wealth of the several States, a census shall be taken of the free white inhabitants and  $\frac{3}{5}$ ths of those of other descriptions on the 1<sup>st</sup> year (after this Government shall have been adopted) and every year thereafter; and that the Representation be regulated accordingly."

Mr. Randolph agreed that Mr. Williamson's proposition should stand in the place of his. He observed that the ratio fixt for the 1<sup>st</sup>. meeting was a mere conjecture, that it placed the power in the hands of that part of America, which could not always be entitled to it, that this power would not be voluntarily renounced; and that it was consequently the duty of the Convention to secure its renunciation when justice might so require; by some constitutional provisions."

*Id.* at 578-79 (footnote omitted).

The many aspects of the question of future apportionments of the House were hotly debated. As indicated above, the chief question was the appropriate degree of legislative discretion. Randolph argued against Gouverneur Morris that future reapportionments resulting from changing population and the admission of new States must be required because otherwise States will be unwilling to give



up power they presently hold. *Id.* at 580, 584-86. Further, he declared, “The census must be taken under the direction of the General Legislature. The States will be too much interested to take an impartial one for themselves.” *Id.* at 580. Madison contended that to assure accuracy in the count, *i.e.* to prevent exaggeration of the count by the States, the apportionment of taxes would be according to population. *See* THE FEDERALIST No. 54, at 340 (James Madison), attached as Exhibit K. Thus, the tendency of any State to inflate the census count to increase the State’s representation in the House would be counterbalanced by a commensurate increase in the amount of taxes apportioned to the State.

On July 12, 1787, the Convention unanimously passed a resolution that “direct Taxation ought to be proportioned according to representation.” 1 FARRAND, at 589. Upon the passage of that resolution,

it was moved and seconded to substitute the following, namely.

“And in order to ascertain the alteration in the representation which may be required from time to time by the changes in the relative circumstances of the States—Resolved that a Census be taken within two years from the first meeting of the Legislature of the United States, and once within the term of every        years afterwards of all the inhabitants of the United States in the manner, and according to the ratio recommended by Congress in their resolution of.    and that the Legislature of the United States shall arrange the representation accordingly.

*Id.*

The convention considered various amendments to the resolution, including setting the first census within six years of the first meeting of the Legislature, providing that subsequent censuses be held every twenty years, and a provision linking the apportionment of direct taxation to the States on the basis of population. *Id.* at 590-91. Finally, by a vote of six States for, two States against, and two States divided, the convention approved the following resolution:



Provided always that representation ought to be proportioned according to direct Taxation and in order to ascertain the alteration in the direct Taxation which may be required from time to time by the changes in the relative circumstances of the States -- Resolved that a Census be taken within six years from the first meeting of the Legislature of the United States and once within the term of every Ten years afterwards of all the inhabitants of the United States in the manner and according to the ratio recommended by Congress in their resolution of April 18. 1783<sup>[18]</sup> – and that the Legislature of the U.S. shall proportion the direct taxation accordingly.

*Id.* at 590-91. The question of how slaves were to be included was still open, *id.* at 603-05, and the apportionment of the first legislature was not yet resolved. 2 FARRAND, at 13. Because any matter could be reconsidered at any time, the resolution was modified from time to time.

On July 24, the Convention voted to submit the resolutions adopted to a Committee of Detail, consisting of Rutledge, Randolph, Gorham, Elseworth, and Wilson. *Id.* at 106. Randolph's notes suggested that "only essential principles should be inserted [in a constitution], lest government be clogged by permanent, unalterable provisions, which ought to be shaped to later times and events. Simple, precise language should be used and not be general propositions stated; 'for the construction of a constitution of necessity differs from that of law.' " BOWEN, at 197 (paraphrasing and quoting

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<sup>18</sup> That resolution amended the eighth article of the Articles of Confederation to read as follows:

All charges of war and all other expences that have been or shall be incurred for the common defence or general welfare, and allowed by the United States in Congress assembled, except so far as shall be otherwise provided for, shall be defrayed out of a common treasury, which shall be supplied by the several states in proportion to the whole number of white and other free citizens and inhabitants, of every age, sex and condition, including those bound to servitude for a term of years, and three-fifths of all other persons not comprehended in the foregoing description, except Indians, not paying taxes, in each State; which number shall be triennially taken and transmitted to the United States in Congress assembled, in such mode as they shall direct and appoint.

JOURNALS OF THE CONTINENTAL CONGRESS 1774-1789, at 191 (Gaillard Hunt ed., Government Printing Office 1922) (1783), attached as Exhibit L.

a document in Randolph's handwriting and found in George Mason's papers). By the time of the ninth report of the committee, the provision as it would appear in the Constitution was taking shape:

The propositions of direct Taxation shall be regulated by the whole Number of white and other free Citizens and Inhabitants, of every Age, Sex and Condition, including those bound to servitude for a Term of Years, and three fifths of all other Persons not comprehended in the foregoing Description; which Number shall, within six Years after the first meeting of the Legislature, and within the Term of every ten Years afterwards, be taken in such Manner as the said Legislature shall direct.

From the first meeting of the Legislature until the Number of Citizens and Inhabitants shall be taken as aforesaid, direct Taxation shall be in Proportion to the Number of Representatives chosen in each State.

2 FARRAND, at 168.

By the first week of September, the convention had agreed to all the provisions of the Constitution. The resolutions adopted were submitted to a Committee of Style and Arrangement "to revise the style of and arrange the articles which had been agreed to by the House." BOWEN, at 234. The committee's final product is the version of Art. 1, § 2, cl. 3 as it appears in the Constitution today. The committee did not alter the substance of any of the resolutions passed but put the various provisions in an orderly arrangement and rephrased some provisions.<sup>19</sup> See *Nixon v. United States*,

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<sup>19</sup> That the Constitution uses "Enumeration" as opposed to "census" is of no import. Article 1, Section 9, Clause 4 of the Constitution provides: "No Capitation, or other direct, Tax shall be laid, unless in Proportion to the Census or Enumeration herein before directed to be taken." Hamilton in *The Federalist Papers* refers to "[a]n actual census or enumeration" which will be the basis for assessment of direct taxes upon the States. *THE FEDERALIST* No. 36, at 220 (Alexander Hamilton), attached as Exhibit M. Possibly, enumeration was substituted for census because census once meant "the registering of Roman citizens and their property, registered property, wealth. 2 OXFORD ENGLISH DICTIONARY 1031 (2d ed. 1989). Because the Framers decided that the calculation of wealth was too inexact and since the word "census" had taxing and wealth connotations, the Committee of Style may have substituted "enumeration" for "census." By 1769, the current usage of census as "[a]n official enumeration of the population of a country or district, with various statistics relating them" was being employed. *Id.*

506 U.S. 224, 231(1993) (“accepting as we must the proposition that the Committee of Style had no authority from the Convention to alter the meaning of the Clause, *see* 2 [FARRAND, at 553], we must presume that the Committee's reorganization or rephrasing accurately captured what the Framers meant in their unadorned language”). *See also Powell v. McCormack*, 395 U.S. 486, 538-539 (1969).

Plaintiffs’ argument that “[t]he Framers understood and discussed the difference between an ‘estimate’ and a physical count of the actual ‘number of persons in a population,’” Pl. Mem. at 43, is both misleading and a red herring. It is misleading because it implies that the delegates to the Constitutional Convention actually considered estimating the population as an option. It is clear that by the phrase “actual Enumeration” the Framers contemplated nothing other than the taking of a census. The only reference to an “estimation” had to do with whether wealth should be taken into account. At best, the wealth of the States only could be “estimated,” and eventually the Framers rejected the idea.<sup>20</sup>

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<sup>20</sup> Plaintiffs’ citation to the records of the Convention show without question that references in the debates to using estimations were all related to calculating wealth:

Mr. Sherman thought the number of people alone the best rule for measuring wealth as well as representation; and that if the Legislature were to be governed by wealth, they would be obliged to estimate it by numbers. He was at first for leaving the matter wholly to the discretion of the Legislature; but he had been convinced by the observations of (Mr. Randolph & Mr. Mason) that the periods the *periods* & the *rule* of revising the Representation ought to be fixt by the Constitution. 1 FARRAND, at 582 (emphasis in original).

Mr. Patterson considered the proposed estimate for the future according to the Combined rule of numbers and wealth, as too vague. 1 FARRAND, at 561.

Two objections had been raised agst. leaving the adjustment of the Representation from time to time, to the discretion of the Legislature. The 1. was they would be

Plaintiffs' prolonged discussion of the Framers' rejection of estimation in determining the population is also a red herring. No one contends that the Framers intended or that the Constitution permits an unscientific approximation of the country's population in some manner unrelated to taking a census. The Framers certainly expected that the census would be taken by counting the people in such manner as Congress shall direct. Plaintiffs, however, are equating estimation, as discussed by the Framers, with the process of imputation, thereby contending that the Constitution forbids the latter as well as the former. To estimate the population is to make an approximate judgment as to its size. To use imputation with respect to the census is to employ a scientific method to improve the accuracy of the enumeration of our citizens. Peterson Decl. ¶ 11 The rough estimates of laypersons are at most good approximations; statistical analyses produce results calculated to be accurate within a specified degree. The scientific validity of statistical analysis cannot be derogated by dismissing it as mere unscientific estimation.<sup>21</sup>

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unwilling to revise it at all. The 2 that by referring to *wealth* they would be bound by a rule which if willing, they would be unable to execute. 1 FARRAND, at 583 (emphasis in original).

<sup>21</sup> Justice Scalia's fear that the use of statistical techniques in the Census might some day compel the Court "to determine which [estimation technique would] so obviously create[] a distortion that it cannot be allowed" and that having to make such determination would give rise to a "new specialty of 'Census Law'" is not likely to be realized. *House of Representatives*, 525 U.S. at 349 (emphasis omitted). First, it is the primary responsibility of Congress to determine how the Census will be conducted. Second, where there are several reasonable alternative methods, the Court need not interfere with Congress's judgment as to which method to employ. See, e.g., *Department of Commerce v. Montana*, 503 U.S. 442 (1992)(Congress's determination of apportionment method is reviewable but due great deference). Even if a federal court were required to review a statistical method, courts are often called upon to review and assess the opinions of experts. See, e.g., Federal Rule of Evidence 702, and *Daubert v. Merrell Dow Pharms.*, 509 U.S. 579 (1993)(courts must act as gatekeepers to exclude unreliable expert testimony).

If the Framers even considered estimation as an alternative to a house-by-house count of the population, they did it without knowledge of the principles of statistical sampling, estimation, extrapolation and confidence intervals now commonly taught in college courses, because those principles had not yet been discovered, articulated and disseminated. The Royale Statistical Society was established in 1834, *see The Royal Statistical Society* (last modified Jun. 2001) <<http://www.rss.org.uk>>, and the American Statistical Association was established in 1839, *see The American Statistical Association: About the ASA* (last modified Jan. 19, 2001) <<http://www.amstat.org>>, both events marking the emergence of the new science of statistics, but statistics as a separate scientific discipline was not recognized until the Twentieth Century. STEPHEN M. STIGLER, *HISTORY OF STATISTICS: THE MEASUREMENT OF UNCERTAINTY BEFORE 1900* (1986), at 1. *See also*, 25 *ENCYCLOPEDIA AMERICANA* 629, 634-35 (2001).

To the extent that the Framers had any concept of estimation as an alternative to a house-by-house count, that concept was surely of a technique fraught with imprecision and the potential for bias, each of unknown and undiscoverable magnitude. Estimation to the Framers had to be, at the very best, an informed guess. Estimation today, as the term is used in statistical science, involves approximations generally having a known and often very tightly controlled degree of accuracy. What a scientist today calls an estimate can often be assured to be a very close approximation to the quantity estimated. It is most certainly not a guess in the unfettered sense that would have been the norm in 1787.

But since the science of statistics was only nascent in the Eighteenth Century, *see* Pl. Mem. at 43 n.8, it is improbable that the Framers considered the use of statistical methods for taking the census. The absence of anything in the record of the Convention indicates assuredly that they did

not. Instead, the Framers provided for the population to be determined by the best means available to achieve “a just and perfect enumeration,” *House of Representatives*, 525 U.S. at 335 -- a house-to-house count. There is nothing in the Constitution that does or should preclude Congress from directing the use of statistical methodology. Except where explicitly or by clear implication restricted by the Constitution, the Government is free to adopt new means to accomplish its functions. The Constitution has not relegated the Government to Eighteenth Century methodology for the taking of the census, and the courts would do the citizens a disservice by shackling the manner of the census to antiquated methodologies.

Moreover, to read the phrase “actual Enumeration” as defining the process for taking the census is to ignore the substantive provisions of the remainder of the sentence. The Census Clause specifies that (1) there will be an “actual Enumeration” (by the taking of a census used to allocate representation in the first Congress), (2) that the “actual Enumeration” shall be conducted within three years of the first meeting of Congress, (3) and that the enumeration shall be “made. . . in such Manner as they [Congress] shall by Law direct.” That the word “enumeration” meant in the Eighteenth Century, as it does today, a counting or numbering, see *id.* at 347 (Scalia, J., concurring), says little about how the enumeration shall be conducted. That is the sort of detail that, as Edmond Randolph’s notes suggested, should not be set out in the Constitution but determined by the legislature, “lest government be clogged by permanent, unalterable provisions, which ought to be shaped to later times and events.” BOWEN, at 197. That the first and subsequent Congresses provided by statute that the censuses be accomplished by enumerators who were to make a house-to-

house count,<sup>22</sup> *see House of Representatives*, 525 U.S. at 335-36, simply demonstrates that those Congresses believed at the time that a house-to-house count was the best way to accomplish a census that would be as accurate as humanly possible.

Plaintiffs' contention that the Census Bureau's having "the discretion to decide whether to implement the form of statistical sampling known as imputation, and further to determine the methodology and extent of such imputation [would mean the Bureau would] possess the very power that the Framers meant to withhold under the Census Clause: to manipulate the census in an attempt to further their own political interests." Pl. Mem. at 41. As discussed above, the discretion which the Framers chose not to leave to Congress was to decide how frequently censuses would be conducted and when Congress must reapportion itself. In fact, the Framers were concerned that the States would manipulate their population figures if taking the census were left to the States. But fear that the census might be manipulated did not prevent the Framers from imposing in Congress "virtually unlimited discretion" in conducting the decennial 'actual Enumeration.'" *Wisconsin v. City of New York*, 517 U.S. 1, 19 (1996). And Congress has maintained its power to oversee the Census Bureau's plan to conduct the census and to limit the Bureau's exercise discretion, as the statutory prohibition against sampling attests.<sup>23</sup>

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<sup>22</sup> Although Congress provided for a house-to-house count census, enumerators merely had to ascertain from the head of the household or other agent of the family the information required by Congress. Later, enumerators were permitted to obtain information from neighbors if no one was present at the dwelling. *House of Representative*, 525 U.S. at 335 n.5.

<sup>23</sup> That the census could be manipulated by the use of statistical methods, including imputation, is no more probable than that the census could be manipulated by the utilization of resources in conducting a head-count census. For example, if the Bureau did not employ sufficient personnel to canvass a large metropolitan error or perhaps even a sparsely populated area, a undercount could result. There is no evidence that the Bureau has intentionally manipulated the outcome of the census

In sum, the Constitution empowers Congress to determine how the Census shall be taken and does not preclude the employment of statistical methods, including sampling or imputation, if Congress so authorizes. The use of imputation in the Census computation of the population of the States for the purpose of apportionment of Congress, therefore, does not violate the Constitution.

### **CONCLUSION**

For the reasons set forth above, plaintiffs' motion for summary judgment should be denied, and defendant-intervenors' motions to dismiss and for summary judgment should be allowed.

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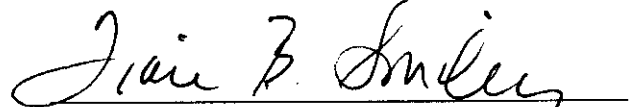
— indeed the presumption should be that the Bureau has executed its duties in good faith and to the best of its abilities. Peterson Decl. ¶ 12. It is certainly farfetched to imply, as plaintiffs do (Pl. Mem. at 41), that the Bureau has manipulated the data so that North Carolina, and not Utah, would gain a seat in Congress.

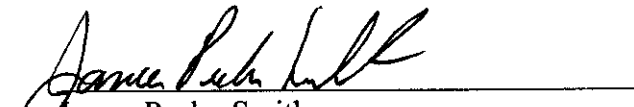


This the 10<sup>th</sup> day of July, 2001.

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### CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing **North Carolina Intervenor's Memorandum in Support of Motion to Dismiss and for Summary Judgment and Exhibits A-M** have been served by Federal Express, Priority Overnight delivery, next business day, addressed as follows:

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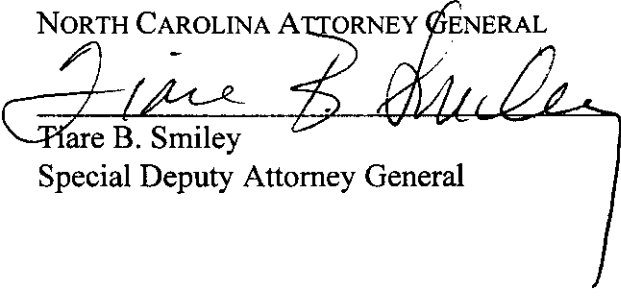
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